

1                   IN THE UNITED STATES DISTRICT COURT

2                   IN AND FOR THE DISTRICT OF DELAWARE

3                   -   -   -

4       EDWARDS LIFESCIENCES AG and       :       Civil Action

5       EDWARDS LIFESCIENCES LLC,       :

6                   Plaintiffs,       :

7                   v.       :

8       COREVALVE, INC.,       :

9                   Defendant.       :       No. 08-91 (GMS)

10                  -   -   -

11                               Wilmington, Delaware

12                               Wednesday, March 31, 2010

13                               9:00 a.m.

14                               Day 7 of Trial

15                  -   -   -

16       BEFORE:   HONORABLE GREGORY M. SLEET, Chief Judge,  
17   and a Jury

18       APPEARANCES:

19                   JACK B. BLUMENFELD, ESQ.

20                   Morris, Nichols, Arsht & Tunnell LLP

21                   -and-

22                   JOHN E. NATHAN, ESQ.,

23                   CATHERINE NYARADY, ESQ.,

24                   BRIAN EGAN, ESQ., and

25                   KRIPA RAMAN, ESQ.

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1 APPEARANCES CONTINUED:

2 JOHN W. SHAW, ESQ.  
3 Young Conaway Stargatt & Taylor LLP

4 -and-

5 ROBERT A. VAN NEST, ESQ.,  
6 BRIAN FERRALL, ESQ., and  
7 KAREN VOGEL WEIL, ESQ.

8 -and-

9 JOSEPH S. CIANFRANI, ESQ.  
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12 Counsel for Defendant

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1 THE COURT: Good morning, counsel.

2 (Counsel respond "Good morning.")

3 THE COURT: Are we ready for our next witness?

4 MR. VAN NEST: Your Honor, if I could give the  
5 Court a report on time very briefly. The parties have  
6 conferred. And the defense has three hours and 27 minutes  
7 of time remaining, the plaintiff has one hour and 31 minutes  
8 of time remaining.

9 On the defense side, we have two live witnesses  
10 to present this morning, Dr. Kinrich and Dr. Rothman, and  
11 two short videos. And then we will hear what if any  
12 rebuttal there will be.

13 On the defense side, we are trying very hard  
14 to -- we don't expect to use all of our time, although we  
15 may. We are trying to get to the point where possibly, if  
16 the Court is ready to do it and we have got everything lined  
17 up, we could instruct later today.

18 THE COURT: I thought, my thinking was that at  
19 the close of the evidence, we could talk about the points of  
20 disagreement. I have thoughts, leanings, with regard to the  
21 instructions. We can do that.

22 I am glad you interrupted me before calling the  
23 jury out, because two of the jurors have reported to Ms.  
24 Walker -- it was a question first, from the jury. That was,  
25 it had to do with the length of deliberations and how long

1       they would be permitted to deliberate.

2               Two of the jurors do have vacation plans, but  
3       are willing to come back should it be required for them to  
4       continue their deliberations Monday.

5               The Court will close Friday.

6               And so that's good news on two counts. No. 1,  
7       they won't feel the pressure, neither side wants them to  
8       feel undue pressure, I am sure, to get through the evidence  
9       they need to get through. And that gives me less of a sense  
10      of urgency than I had coming into work this morning.

11              MR. VAN NEST: That is good to know. Thank you,  
12      Your Honor.

13              THE COURT: Mr. Nathan, do you concur in the  
14      calculations, the time report?

15              MR. NATHAN: I do, Your Honor. We will not have  
16      any videos to play in rebuttal, if they play the ones they  
17      are talking about. We have two potential rebuttal  
18      witnesses. And we will have to see what they say in  
19      response to Dr. Kinrich and Professor Rothman.

20              THE COURT: Mr. Nathan, what you want to keep in  
21      mind is -- and I won't say anything more than this at this  
22      point -- in spite of what I just reported to the parties  
23      regarding the jury's willingness to continue on, when we had  
24      the pretrial conference I think I made a point that the  
25      closings, openings and closings were part of the time

1 calculus.

2 MR. NATHAN: I understand, Your Honor.

3 THE COURT: If there was a miscommunication on  
4 that, we need to talk about that right now.

5 MR. VAN NEST: I don't think there is any  
6 miscommunication. What we understood was that the idea was  
7 we would close our proofs today, and each have an hour of  
8 argument tomorrow.

9 THE COURT: Good.

10 MR. VAN NEST: That is what we are assuming.

11 THE COURT: That is what I said may please me  
12 the other day.

13 What I am really talking about right now or  
14 referencing is the rebuttal, and your report on the  
15 plaintiffs' remaining time, which is an hour and 31 minutes.

16 MR. NATHAN: I understand. And I can go  
17 further. We don't anticipate calling any rebuttal  
18 witnesses. The word I tried to use was potential.

19 MR. BLUMENFELD: Your Honor, when I stood up on  
20 Monday morning and said Mr. Shaw and I had reached an  
21 agreement on time subject to Your Honor's approval, it was  
22 the time for these three days, I think that Mr. Shaw and I  
23 both agreed, again, subject to Your Honor's approval, that  
24 that was in addition to the hour of closings tomorrow.

25 We have a lot less time than originally

1       scheduled.

2               THE COURT: I think Mr. Van Nest is a little  
3 surprised. I am okay with that, given what I have just  
4 reported concerning the jury. Okay.

5               MR. VAN NEST: I think we are on the same page,  
6 Your Honor.

7               THE COURT: Okay. Ms. Walker.

8               I am going to ask both parties, to the extent  
9 that you care to accept the invitation, to hang around for a  
10 bit after the verdict. Sometimes that's difficult for one  
11 side or the other to do, for two reasons: Number one, I do  
12 speak with my juries afterwards. Sometimes there is  
13 valuable, nothing for appeal purposes, but valuable  
14 information from those conversations, and, two, I do want to  
15 talk about the time that it's taken to do this, to present  
16 the evidence in this case.

17               I don't want to lecture. I just want to talk  
18 about it.

19               (Jury enters courtroom at 9:05 a.m.)

20               THE COURT: It might be educational for me,  
21 quite frankly.

22               Good morning. How are you? Please take your  
23 seats.

24               There may be things that I can learn from you.

25               MS. WEIL: Thank you, Your Honor. Good morning.

1                   CoreValve calls as its next witness Mr. Jeffrey  
2     Kinrich.

3                   While he is taking the stand, may I approach and  
4     distribute books?

5                   THE COURT: Ms. Walker will give you assistance.

6                   ... JEFFREY KINRICH, having been duly sworn as a  
7     witness, was examined and testified as follows ...

8                   DIRECT EXAMINATION

9     BY MS. WEIL:

10    Q.     Good morning, Mr. Kinrich.

11    A.     Good morning.

12    Q.     Would you please introduce yourself to the jury?

13    A.     My name is Jeff Kinrich. I only -- as someone else  
14     said, I only have one wife, and three children, ages 23 to  
15     17. The are mostly wonderful.

16                   And I am a certified public accountant.

17                   I live in Los Angeles.

18                   I am happy to be here.

19    Q.     We are happy to have you.

20                   Are you testifying here today as an expert  
21     witness?

22    A.     I am.

23    Q.     On what subject?

24    A.     On the subject of damages, that is, should plaintiff  
25     prevail in this case, should Edwards prevail, what the case

Kinrich - direct

1 is worth.

2 Q. Okay. And before we get into your opinion on damages,  
3 I would like to go over a little bit of your background. If  
4 you could tell us about your education?

5 A. Yes. I got a Bachelor's degree in mathematics from  
6 Pomona College, which is in Southern California.

7 I then went on to graduate school and got a  
8 Master's degree in statistics at Stanford University.

9 I was in a Ph.D. program in statistics, but I  
10 dropped out. Actually, I technically took a leave. I am  
11 still on leave 35 years later. I may not be going back. I  
12 decided I did not want to pursue that direction.

13 Instead, I went to work for a living, and then  
14 got a Master's in business administration degree, an M.B.A.,  
15 in finance; then later became a certified public accountant,  
16 a CPA.

17 Q. Where did you get your M.B.A.?

18 A. My M.B.A. was at the University of Maryland.

19 Q. And would you tell us a little bit about your relevant  
20 work experience?

21 A. After my M.B.A., I started work at PriceWaterhouse,  
22 which was at the time one of the Big 8 accounting firms,  
23 probably best known for being the people that count the  
24 Academy Award ballots. By the way, the secret room where  
25 they count them was the conference room by my office, but it



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1 wasn't very secret. I had nothing to do with that count,  
2 however.

3 I worked there for over 20 years. It moved from  
4 PriceWaterhouse to PricewaterhouseCoopers, after a merger.  
5 And I stayed there from 1981 to 2001.

6 I left in 2001 to join the firm I am currently  
7 with, a firm called Analysis Group. We have a firm of  
8 consulting economists, accountants, finance people, things  
9 of that sort, who work on economic and financial issues for  
10 our clients.

11 Typically, that includes things like I am doing  
12 here today, valuation litigation, damage assessment, things  
13 of that sort.

14 We have about 500 people across the country,  
15 about 70 of them are in Los Angeles with me.

16 I am what is called a managing principal there,  
17 which is sort of like being a partner, except we are legally  
18 a corporation, not a partnership. So no partners.

19 Q. Have you had experience evaluating damages in patent  
20 infringement cases?

21 A. Yes. I have done hundreds of patent infringement  
22 matters.

23 Q. And have you written articles about determining  
24 damages in patent cases?

25 A. I have. I have published several articles on that

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1 subject.

2 Q. And you testified that you are testifying here as an  
3 expert today on the subject of damages.

4 Are you providing any opinion as to whether  
5 CoreValve has infringed the Andersen patent or whether that  
6 patent is valid?

7 A. No. I have no opinion whatsoever on the infringement  
8 or technical issues.

9 Q. For purposes of your opinion, are you just assuming  
10 that there is liability?

11 A. Well, the jury never reaches the issue of damages  
12 unless they find liability. So I do assume liability for  
13 purposes of doing a damage calculation and for nothing else.

14 Q. And if the jury finds that the Andersen patent is not  
15 infringed or is invalid, what is the relevance of your  
16 testimony here today?

17 A. They can ignore everything I have to say, because I  
18 have no relevance at that point.

19 Q. And you are here to rebut the testimony of Dr. Leonard  
20 that was provided last week?

21 A. In part, to rebut Dr. Leonard's testimony. In part,  
22 to provide my own affirmative opinion as to what damages  
23 would be if liability is found.

24 Q. Would it be fair to say you did a lot of work prior to  
25 today to prepare for your opinions?

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1 A. Yes. That is the technical term we use in the  
2 profession, "a lot of work," yes.

3 Q. Can you tell us the kinds of documents and things that  
4 you did to prepare your opinions in this case?

5 A. I looked at a lot of documents. I looked at things  
6 like depositions. I looked at business plans. I looked at  
7 financial statements. I interviewed people.

8 I looked at lots of the production of documents,  
9 boxes and boxes and boxes of documents, having to do with  
10 issues, business issues, manufacturing issues, things that  
11 have to do with how these products were made, sold, and what  
12 would happen if circumstances changed.

13 Q. Including financial information of the parties?

14 A. Absolutely.

15 Q. Marketing information of the parties?

16 A. Yes, marketing information, lots of it.

17 Q. And you said you interviewed people. Who did you  
18 interview?

19 A. I spoke to Mr. Michiels, Rob Michiels, who testified  
20 yesterday. I spoke to several other people who worked at  
21 CoreValve and Medtronic. And I think everybody I spoke to  
22 was someone who was associated with CoreValve or Medtronic.

23 Q. Can you give us an idea of the volume of documents  
24 that you have reviewed in this case?

25 A. I can use that same technical term and just say it's a

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1 lot. But it was boxes and boxes, and then a lot more that  
2 was in computer form so it doesn't pile up on a desk. But  
3 it certainly is a lot of volume of spreadsheets and  
4 financial statements and depositions and marketing plans and  
5 things of that sort.

6 Q. Can you give us an idea of how many hours you and your  
7 colleagues spent reviewing all of this in formulating your  
8 opinions?

9 A. Hundreds, hundreds of hours. I can't be more precise,  
10 but many hundreds.

11 Q. Based on all the work that you have done, what  
12 opinions have you formed as to what the damages would be in  
13 this case if liability is found?

14 A. Well, you may recall that damages in a patent case  
15 fall in two categories. There is what is called lost  
16 profits, and then there is a category called reasonable  
17 royalty.

18 My opinion is there are no lost profits. The  
19 lost profits are zero.

20 The reasonable royalty through December 31 of  
21 2009 is about 1.2 million dollars.

22 Q. Now, you said that your damages number goes through  
23 December 2009. You were here during the testimony of Dr.  
24 Leonard. Correct?

25 A. I was.

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1 Q. Do you recall that he gave a damages number through  
2 trial?

3 A. His number was actually through March 15th of this  
4 year, not quite through trial, but through a couple weeks.

5 Q. Why is your damages number through December 2009 and  
6 Dr. Leonard's through March 15?

7 A. Because the parties only produced documents, produced  
8 information about sales and things like that through  
9 December 2009. You have to stop sometime.

10 The information produced in this case ran  
11 through December 2009.

12 Dr. Leonard projected or estimated what it might  
13 be during that intervening period. But in my experience, no  
14 matter what date you pick, there is always tomorrow and  
15 there is always one more day.

16 What usually happens is the Court and the  
17 parties, after the case is over, resolve the gap, if any.

18 So what I did was limit it to data that was  
19 real, not projections and expectations, recognizing, you are  
20 always going to have to deal with a couple more days of  
21 sales anyway.

22 Q. Okay. So we are going to talk about both lost profits  
23 and reasonable royalty and your opinion on both.

24 Let's start with lost profits. You testified  
25 that you don't think that there are lost profits in this

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1 case.

2 If we could put up Demonstrative 2. Can you  
3 tell us what this is and why you do not believe that Edwards  
4 is entitled to any lost profits in this case?

5 A. Yes. There is a case called Panduit. It is the name  
6 of a litigation matter. It is the name of one of the  
7 parties. This is guidance for people that do what I do.

8 There are what are called four Panduit factors.  
9 Courts have said that this is a good way to figure out if  
10 there are lost profits.

11 The four are, first, is there demand for the  
12 patented technology? And I didn't even address that issue.  
13 I said, fine, I will assume there is. And I didn't consider  
14 it further.

15 Second, the question is, is there an absence of  
16 acceptable noninfringing alternatives? What does that mean?  
17 That essentially says, can the defendant, if they don't  
18 infringe, do something else that's acceptable to the  
19 marketplace? Here the answer is, yes, there is something  
20 else. Dr. Leonard agrees. They could manufacture overseas.  
21 There is nothing about this case that says they can't make  
22 the product. They merely can't make it in the United  
23 States. All of their sales are outside of the United  
24 States, that is not even disputed, that is not an issue. So  
25 the acceptable noninfringing alternative is to manufacture

Kinrich - direct

1       overseas.

2                   Third, even if they couldn't manufacture it  
3       overseas, could the -- the question I had to ask myself is  
4       could Edwards fulfill the demand for the product if  
5       CoreValve isn't making it? And I found the answer is no,  
6       for reasons having to do with training, bottlenecks,  
7       customer demand, things of that sort. And I will talk about  
8       that a little bit more.

9                   Finally, the last one is really mechanical: Can  
10      the parties actually compute a number? And I said, yeah,  
11      they can, I am a good accountant, I can do it. Dr. Leonard  
12      can do the arithmetic. That became a nonissue.

13                  The two middle ones are the reasons separately  
14      and independently why there are no lost profits.

15      Q.       Is it your understanding, Mr. Kinrich, that in order  
16      to get lost profits under this test Edwards has to satisfy  
17      all four of these prongs?

18      A.       Yes. If any one of them fails, then there are no lost  
19      profits.

20      Q.       And you believe that two of them fail?

21      A.       I do.

22      Q.       And just to clarify, those are independent reasons for  
23      why you think there is no lost profits?

24      A.       Yes. The first --

25                  THE COURT: Counsel, I would appreciate that you

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1 not lead the witness.

2 MS. WEIL: Thank you, Your Honor.

3 BY MS. WEIL:

4 Q. What is the significance of there being "no" on two  
5 lines there?

6 A. They are two separate reasons. The first is if I'm  
7 correct -- and I'll show you why I think I'm correct -- that  
8 there is an acceptable noninfringing alternative and that  
9 CoreValve would have succeeded in making all of the sales we  
10 did, we're done. There can be no questions that CoreValve  
11 would have made those sales. There is nothing left extra  
12 for Edwards to pick up. That seems pretty clear to me.

13 If there were some unfulfilled sales, some sales  
14 that CoreValve lost, we turn to the second question. And if  
15 it is the case that Edwards couldn't have fulfilled them  
16 anyway, there is still no lost profits so there are two  
17 separate and independent bases.

18 Q. So we'll talk about each of those two bases one at a  
19 time. And let's talk the first one, the absence of  
20 acceptable noninfringing alternatives.

21 So you testified that both you and Dr. Leonard  
22 agree that CoreValve would have gone overseas. You conclude  
23 no lost profits. He concludes lost profits on virtually all  
24 of CoreValve's sales.

25 Why do you come to completely different



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1 conclusions starting from the same premise?

2 A. It's all in the timing.

3 Q. And what do you mean by that?

4 A. The entire difference on this issue, between  
5 Dr. Leonard and me, has to do with the sequence of events  
6 when the parties would -- when CoreValve would take certain  
7 actions and then how long it would take them to complete the  
8 actions. For example, when CoreValve would start to move  
9 their facility overseas, if they had to, and then how long  
10 it takes them to get up and running.

11 Dr. Leonard concluded certain things and  
12 Mr. Michiels yesterday explained why those things were not  
13 reasonable. And I have taken those various steps and done  
14 the calculations necessary to show there are no lost  
15 profits.

16 Q. Okay. In Dr. Leonard's testimony, we heard the  
17 expression but-for world. Did you look at the but-for  
18 world?

19 A. Yes. That's a common phrase in my profession. You  
20 talk about but for the actions of the defendant, what would  
21 have happened.

22 Q. Okay. And did you look at what CoreValve would have  
23 done in this but-for world?

24 A. I did.

25 Q. And did you prepare a time line to show what you think

Kinrich - direct

1 would have happened in the but-for world?

2 A. I did.

3 Q. And if we could put up Demonstrative 4.

4 All right. Would you explain what is shown  
5 here?

6 A. Yes.

7 Q. And do you have a laser pointer?

8 A. Yes. Is this one? Yes, this looks like one.

9 Q. That might help.

10 A. Let's start with the bottom. Ignore the top for a  
11 minute, start with the bottom, what really happened.

12 What really happened was in the Fall of 2004,  
13 CoreValve began setting up its U.S. facility. And at that  
14 point began to first manufacture its Generation 2 prototype.

15 In March of '05, it first manufactured its  
16 clinical grade, that is, one suitable for implantation, of  
17 that version.

18 Late summer 2005, it started manufacturing its  
19 Generation 3 prototype.

20 In April of 2006, it first manufactured the  
21 clinical grade version of that for clinical trials and  
22 implantation.

23 Then in March, 2007, it received the CE mark  
24 approval in Europe, and it began selling in April.

25 And then in July, it opened a larger

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1 state-of-the-art manufacturing facility. Until then, it was  
2 manufacturing at this smaller facility that really didn't  
3 have high volume production capabilities.

4 And only by '08 was it able to scale up  
5 production. That's what really happened.

6 Now, in my hypothetical but-for world, CoreValve  
7 discovers when it starts making its products, when it starts  
8 developing its prototypes, whoops, we can't do that. If we  
9 make these in the United States, they would infringe. And  
10 the assumption made by the law, as I understand it, is that  
11 the parties both understand in this hypothetical discussion,  
12 that if you make your product, it will infringe a patent.

13 So you have to ask yourself what would the  
14 parties do? In this case, what would CoreValve do?

15 Well, CoreValve had just begun setting up a U.S.  
16 facility at the time that, of the Gen 2, Generation 2  
17 prototype. The Generation 2 prototype is exactly the same  
18 frame as the Generation 3. And Dr. Buller said the  
19 Generation 2 prototype infringes as well. So at that point,  
20 they know they've got an infringing product or potentially  
21 infringing product.

22 They simply don't set up a U.S. facility. They  
23 set up an overseas facility.

24 Mr. Michiels testified, as I heard yesterday,  
25 they could have done that. There were other places in the

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1 world to go. They didn't have to go to Irvine, though they  
2 were happy and satisfied to go to Irvine. It will cost them  
3 some money and some hassle to not go to Irvine. I've  
4 accounted for that but they would have done it somewhere  
5 else.

6 If they go somewhere else, the rest of the time  
7 line looks exactly the same. Instead of doing it in the  
8 United States, they would do it overseas. They still  
9 develop things at the same time, and thus they still get  
10 their CE mark approval at the same time. They begin selling  
11 at the same time. They develop an overseas manufacturing  
12 facility instead of a U.S. manufacturing facility at the  
13 same time.

14 Some of these things cost them more money, and  
15 that is part of what I will account for in a royalty  
16 calculation, but it doesn't slow up the sales and,  
17 therefore, it doesn't impact lost profits.

18 Q. And so based upon this time line, what conclusion did  
19 you reach as to the quantity of sales that CoreValve would  
20 have made in this but-for world if it had started overseas  
21 in the fall of 2004?

22 A. CoreValve would have made the same quantity of sales  
23 in the but-for world that it made in the actual world.

24 Q. Okay. And that is why there are no lost profits in  
25 your view?

Kinrich - direct

1 A. That's right. If they make the same quantity, there  
2 are no extra sales up for grabs that Edwards could have  
3 considered, could have possibly obtained. The parties are  
4 competing in the same way. It's just they don't have U.S.  
5 workers and U.S. producers, they have an overseas work  
6 force. That, again, may have cost them an amount of money,  
7 but I will account for that in a royalty calculation.

8 Q. So in this slide, you started your but-for world in  
9 the fall of 2004. And did you also do an alternative time  
10 line starting in the Spring of '05?

11 A. I did.

12 Q. And if we could go to Demonstrative 5.

13 And if you could briefly just explain what is  
14 shown here?

15 A. Yes. You will remember that what I just said on the  
16 first one had to do with the date when the prototype is  
17 first manufactured, the Generation 2.

18 Another way to think about it is let's not think  
19 about the prototypes. Let's think about the first  
20 manufacturing of clinical grade product. Well, that didn't  
21 occur until the Spring of '05. So if, in fact, you don't  
22 make the decision to go overseas in the Fall of '04 because  
23 the research and development process is not considered  
24 infringing but only the manufacture, the clinical grade  
25 product is, then the decision is delayed or at least

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1 possibly delayed.

2 In that case, CoreValve would have to do  
3 something a little different. They would have to use what  
4 is called a contract clean room facility. That is, while  
5 they're building their own facility overseas, they would  
6 have to go somewhere else and essentially rent or  
7 subcontract clean room facilities to get those first few  
8 dozen clinical trials product manufactured, and that will  
9 cost them some more money. It won't delay them any more  
10 time, Mr. Michiels talked about that, but it will cost them  
11 more money.

12 The lack of delay means they actually still do  
13 everything on the same time schedule, and they still get CE  
14 mark at the same time, but as this blue section shows, they  
15 will have to spend some money for contract clean room  
16 facilities. And that means that when I get to royalty, I  
17 have to take that extra cost into account, but it doesn't  
18 change the lost profits arithmetic. They still manage to  
19 produce things at the same time, so there is still no lost  
20 profits.

21 MS. WEIL: Your Honor, I would like to mark  
22 these two time lines Exhibits 1478 and 1479 -- Exhibits  
23 DTX-1478 and 1479.

24 MR. BLUMENFELD: Your Honor, I don't object to  
25 them marking them. I do object to them going into evidence.

Kinrich - direct

1 THE COURT: Okay. Mark them.

2 MS. WEIL: Thank you.

3 You can take that down.

4 BY MS. WEIL:

5 Q. All right. Let's go back to Demonstrative 2.

6 And we've just finished our discussion of the  
7 second factor, absence of acceptable noninfringing  
8 alternative.

9 Let's go to the third one, manufacturing and  
10 marketing ability to meet demand.

11 And would you explain why you believe that  
12 Edwards hasn't satisfied that prong?

13 A. Yes. This has to do with the issues surrounding  
14 training, surrounding the ramp-up time of Edwards,  
15 surrounding doctors and resource use, bottlenecks in the  
16 process that Edwards used to train physicians, and the fact  
17 that they want to proceed at a measured pace, a reasonable  
18 pace, that doesn't jeopardize successful clinical outcomes.

19 Q. And so what did you conclude with regard to the  
20 bottleneck in the waiting list? How did that impact your  
21 conclusion on this factor?

22 A. Well, because there are bottlenecks, because there are  
23 shortages, that is, Edwards can't train the population of  
24 doctors as fast, it bottlenecks -- that was a terrible  
25 sentence -- there is backlog. There is waiting lists that

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1 shows Edwards is not training as fast as the demand exists.  
2 If the demand is twice as big, you still have the  
3 bottlenecks. So even if there were additional doctors who  
4 said train me, train me, they're not training the ones who  
5 already want it. They can't train more. That's part of it.

6 Then you get things that Dr. -- oh, I can't  
7 pronounce his name. Manoharan.

8 Q. Dr. Manoharan.

9 A. Dr. Manoharan -- thank you -- talked about the use of  
10 the Edwards device requires more medical resources: more  
11 operating rooms, more use of anesthesiologists and things of  
12 that sort. So those constraints in most hospitals also  
13 would put a damper on Edwards' ability to proceed even if  
14 they had the training capacity.

15 Q. Now, you heard Dr. Leonard testify that he believed  
16 that Edwards could have expanded its training capacity to  
17 make CoreValve's sales in the but-for world. Do you agree  
18 with that conclusion?

19 A. No. I saw that and I do not agree with that.

20 Q. Okay. Did you rely on some Edwards documents to  
21 support your conclusion on the capacity factor?

22 A. Yes.

23 Q. Okay. If we could call up Exhibit DTX-595.

24 And that should be in your book, Mr. Kinrich.

25 A. I'll look at it on the screen. I see it.



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1 Q. Is this one of the documents that you relied on?

2 A. Yes.

3 Q. And if we could go to the page that ends in 446,  
4 Mr. Hugo. There you go.

5 Okay. What about this did you rely on to  
6 support your opinion on the capacity issue?

7 A. This document is one that Edwards used right just  
8 before it was beginning its roll-out plan. It was not yet  
9 on the market but it was expecting to be on the market soon.

10 And it considered, in terms of strategy, several  
11 cases. It has a base case where it says, if they proceed  
12 only at this level, they risk ceding the market leadership  
13 to CoreValve and leaving some market potential on the table.

14 The one they end up choosing is the one they  
15 call moderate roll-out, with funding as the main limiting  
16 factor. They're able to do a certain number of cases and  
17 that centers, will have a certain amount of money -- I  
18 didn't mention money but money is an issue here -- for the  
19 first 18 months.

20 And then in time, they think they can roll-out  
21 to 300 or 400 more centers. So over time, they have the  
22 capacity to go to 300 or 400 centers but not immediately.  
23 They can't step to that level quickly. The fact that they  
24 moved to a moderate roll-out instead of a base case is based  
25 in part on these words right here.

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1           If it weren't for CoreValve, it looks like they  
2           were more likely to do the base case. CoreValve actually  
3           encouraged them to move faster, not slower, didn't stand in  
4           their way. It's like you are running a race. If you are  
5           jogging on the street, you are not necessarily going to run  
6           as fast as you can. If you run with somebody else, you are  
7           going to put in a little extra burst of speed to beat them.

8           Edwards was trying to beat CoreValve here, move  
9           their development even faster. Without CoreValve, it's not  
10          that they would have had more opportunity to do more, it's  
11          that they probably actually might have gone slower --  
12          certainly no faster.

13        Q.     Okay. And were you here during the testimony of  
14        Mr. Wood?

15        A.     I was.

16        Q.     Okay. And if we could put up a portion of Mr. Wood's  
17        trial testimony. This is from Page 587, lines 12 through  
18        17.

19                   And he was asked -- and this is on Edwards  
20        training and its ability to train.

21                   "Question: But from Day One, you could have  
22        made more sales had you ramped up your training, ramped up  
23        your qualifications and gotten the waiting list worked down.  
24        Right?"

25                   And he answered:

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1                   "Answer: Well, we always worked the waiting  
2 list down. Yes. We could have gone faster from the very  
3 beginning. But, again, we try to be disciplined and do it  
4 responsibly."

5       Q.       What does this say to you about the speed and capacity  
6 or training that Edwards would have done in the but-for  
7 world?

8       A.       This is -- this kind of statement applies to both  
9 Edwards and incidentally to CoreValve. Both of them knew  
10 that they could train doctors faster and faster, but they  
11 also knew if they did that, they would jeopardize clinical  
12 outcomes and jeopardize the long term success of the  
13 business. They had to be, as this says, disciplined and do  
14 it responsibly.

15                   My discussions with CoreValve suggest that they  
16 went as fast as they could while being disciplined and  
17 acting responsibly as well. That Edwards didn't interfere  
18 with CoreValve's growth because the market potential was so  
19 high.

20                   And, similarly, there is nothing here that  
21 suggests that Edwards was constrained. It may be that at a  
22 given hospital, they say, boy, we wish we could have had  
23 that one but because of capacity they're going somewhere  
24 else. They're still going to get the same number, maybe not  
25 the same identical hospitals but the same number of

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1 hospitals based on their ability to train people which can't  
2 expand at an unlimited rate.

3 Q. So does this say anything to you about whether Edwards  
4 would have gone at a faster pace in the but-for world if  
5 CoreValve weren't on the market or were manufacturing  
6 overseas?

7 A. Yes. When you take this -- and there are many other  
8 examples in the documents that suggest backlogs, lots of  
9 documents that say we can't get to those people to train  
10 them, lots of ones that say we can't make these sales  
11 because we don't have enough doctors trained, we don't have  
12 enough trainers to do the training. All of those things  
13 together say that for good reasons, for good business  
14 reasons, having to do with responsible roll-out, they didn't  
15 have more ability to roll-out faster than they did.

16 Now, today, that may not about true. Today,  
17 once you reach enough critical mass, perhaps you can move  
18 faster but that is not what is important. By today, both  
19 parties, I think it's undisputed both parties would pretty  
20 much be on the market.

21 It's this period through 2009 and through today,  
22 that's what is important. And during that period, there are  
23 significant training constraints, not because Edwards is a  
24 badly managed business. These are intentional constraints  
25 to manage and get high clinical outcomes.

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1 Q. Let's look at one more document. If we could call up  
2 DTX-161.

3 Is this another document that you considered on  
4 the capacity issue?

5 A. Yes.

6 Q. And what is your understanding as to what this  
7 document is?

8 A. This is a document that Edwards commissioned from a  
9 research company called Medex to study what is going on in  
10 the market for these heart valves in June of 2008.

11 Q. Let's go to the page that ends 532. And, Mr. Hugo, if  
12 you could pull up the second to last bullet point there:  
13 Big Problem Against Edwards.

14 Okay. And so in this document, it says, big  
15 problem against Edwards throughout Europe is lack of  
16 availability of proctors -- long waiting lists -- CV getting  
17 in first -- TRAIN MORE PROCTORS in all capital letters.

18 Q. What does that say to you about Edwards' training  
19 capacity in the but-for world and whether it could have  
20 increased its training capacity?

21 A. This is what I was referring to before. Proctors are  
22 trainers. And Edwards knew if it had more proctors, more  
23 trainers, it could have gone faster. And it saw, in 2008  
24 that it needed to do that or at least it was a thing that  
25 kept it from proceeding in the market. But it was a self --

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1 I won't say self-imposed constraint, but it wasn't because  
2 of CoreValve being in the marketplace.

3 If there were twice as much available sales,  
4 there is still this constraint. They had a long waiting  
5 list of people. If you had long waiting lists, you can't  
6 say, if the baiting list were even longer, I get them. You  
7 already have a long list. If the line is out the door, it  
8 doesn't get any shorter if now you add more people to the  
9 back and it goes around the block.

10 Q. One last point on the capacity issue. Did you look at  
11 the size of the potential market for these prostheses  
12 products?

13 A. I did.

14 Q. Did you prepare a demonstrative showing the effect of  
15 the size of the potential market on your evaluation of the  
16 capacity issue?

17 A. I did.

18 Q. If we could pull up Demonstrative 6.

19 Would you explain what is shown here?

20 A. Yes. The total size -- every one of these hearts  
21 represents a thousand possible patients during the years  
22 2007 to 2009, based on estimates of market size the parties  
23 had in their planning documents.

24 This is for outside the United States, because  
25 obviously this product is not approved for use in the United

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1 States. There are about 290,000, according to somebody's  
2 estimate, potential patients during this time period.  
3 During that same time period, Edwards sold 6,900 -- those  
4 are the blue hearts over here -- and CoreValve sold about  
5 7,500 products.

6 This entire group of pale blue hearts were  
7 unserviced by anybody.

8 So Dr. Leonard's comment that: "If you can't  
9 get service by CoreValve, you know, what's your choice? You  
10 are going to have to get nothing or get Edwards? And you  
11 will clearly get Edwards," that is not true. All of these  
12 people in the middle were not serviced by CoreValve and  
13 didn't get Edwards, either.

14 This is a very small market -- excuse me. This  
15 is a very early market. The parties are just beginning to  
16 penetrate it through these years. And there are huge  
17 numbers of people, huge demand that isn't being serviced by  
18 either company.

19 There will be a day when this is Coke versus  
20 Pepsi and everybody gets the soda they want. But right now  
21 they are not there. They are both very small, climbing,  
22 tremendous potential. But during this period, clearly,  
23 there are lots of people who get neither.

24 Q. If we could go back to Demonstrative 2. We have  
25 completed our discussion on the two middle factors, capacity

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1 and the overseas manufacturing. And this is the basis for  
2 your opinion that there is no lost profits?

3 A. Correct.

4 Q. Okay. Now, aside from that, did you have additional  
5 criticisms of Dr. Leonard's lost profits analysis?

6 A. Yes.

7 Q. If we could go to Demonstrative 8.

8 Would you briefly explain the criticisms that  
9 are on this slide?

10 A. Yes. Once you get over the hurdle of whether there  
11 are lost profits or not, there is some mechanical, much less  
12 significant issues in Dr. Leonard's calculation. He has  
13 provided for far too long a timeline, even assuming his  
14 starting date as to how long it takes to implement an  
15 overseas facility.

16 Mr. Michiels explained yesterday what a  
17 reasonable timeline is, and Dr. Leonard's is much, much  
18 longer.

19 SAPIEN cannot be used to treat all of CoreValve  
20 patients. Dr. Leonard agrees to some of that. He takes the  
21 annulus size adjustment into account. But he doesn't  
22 properly take into account the fact that some people have a  
23 very small femoral artery. Dr. Manoharan talked about that.

24 He also doesn't take into account the  
25 bottlenecks.



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1                   And then at the last one, he ignores location  
2                   and overlap of customers.

3                   Dr. Leonard assumes that once Edwards makes a  
4                   sale in Europe, every sale that CoreValve makes in Europe is  
5                   up for grabs, even if Edwards doesn't even sell in the right  
6                   country.

7                   So if, for example, CoreValve sells in Italy in  
8                   a certain date and Edwards never sells in Italy until months  
9                   later, Dr. Leonard says that CoreValve sale would be  
10                  available for Edwards to make.

11                  There are documents that say, we can't make  
12                  these sales, we are not in Italy. But Dr. Leonard ignores  
13                  that.

14                  Those are much smaller issues compared to the  
15                  two big issues I have already discussed. But they are part  
16                  of the problem.

17                  Q.       What is the effect of Dr. Leonard doing these  
18                  inaccuracies that are set forth on Demonstrative 8 on your  
19                  analysis?

20                  A.       Well, I fixed them. He has a very large lost profits  
21                  number, in the 70-million-dollar range. When you fix them,  
22                  primarily the timing, that's the biggest single one.

23                  Q.       What do you mean by the timing? Would you explain  
24                  that a little bit more?

25                  A.       Even if you accept Dr. Leonard's starting point --

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1 remember, he started in January of 2006. If you fix the  
2 timing from that point forward -- let me back up.

3 Remember, I say the timing starts in 2004 to  
4 2005. That was the timeline I put up a few minutes ago.  
5 Even if you accept his starting point of January 2006, when  
6 you fix the sequence of events as to when CoreValve would be  
7 able to go overseas and when it would be able to do its  
8 manufacturing, you do get at that point a little bit of  
9 potential lost profits. But the number comes down from some  
10 \$70 million to about \$900,000 under those circumstances.

11 Q. Do you think that that is the right analysis?

12 A. I do not, because I think the timing should start in  
13 2004 or 2005, where there are no lost profits.

14 But if you move the timing to Dr. Leonard's 2006  
15 date, there is the potential for a little lost profits. If  
16 you ignore the training issue, and say give it to Edwards  
17 anyway, you get \$900,000 of lost profits.

18 Q. And that's instead of the 70-million-number that he  
19 gave?

20 A. Yes.

21 Q. All right.

22 So let's put aside lost profits for the moment  
23 and let's talk about reasonable royalty. You concluded, I  
24 believe you testified at the beginning, that you thought  
25 that damages in this case were only in the form of

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1 reasonable royalty in the amount of 1.2 million. Is that  
2 right?

3 A. Correct.

4 Q. How, generally, did you go about determining what the  
5 reasonable royalty should be in this case?

6 A. To determine a reasonable royalty, you set up in your  
7 mind what's called a hypothetical negotiation. You say, the  
8 parties understand that if they make this stuff, they will  
9 be infringing unless they have a license. What would they  
10 reasonably negotiate?

11 On the one hand, Edwards would recognize that if  
12 they don't get a license -- if they don't give a license,  
13 rather, and CoreValve goes overseas, Edwards would get  
14 nothing, because they don't need a license to manufacture  
15 overseas. That's allowed. So anything they get would be  
16 better than nothing.

17 From CoreValve's position, CoreValve says, I am  
18 happy in Irvine. I don't want to move. It's going to cost  
19 me money. It's going to cost me annoyance and hassle to  
20 move overseas. So I would be willing to pay something to  
21 avoid the hassle of leaving.

22 The way you do that is you set up the extra  
23 costs. You say, how much would it cost to go overseas and  
24 how much extra would CoreValve have to spend? And then you  
25 compare those.

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1                   If they would have to spend a certain amount,  
2                   then they might split that, say, you know what, Edwards? I  
3                   will give you half of it or I will give you a third of it to  
4                   avoid the hassle of going overseas.

5                   That is the kind of negotiation that you  
6                   envision. And that's what I did.

7           Q.       In looking at the hypothetical negotiation, what date  
8                   or time frame did you consider for when this hypothetical  
9                   negotiation would have taken place?

10          A.       I considered that it would take place in the period  
11                   from late '04 to spring '05, when CoreValve started to set  
12                   up its facility to manufacture these plants and when the  
13                   clinical manufacturing was being done.

14          Q.       And if you could put up Demonstrative 3, please, Mr.  
15                   Hugo?

16                   Okay. So this is the time frame that you  
17                   considered?

18          A.       Yes.

19          Q.       And do you recall that Dr. Leonard had this  
20                   hypothetical negotiation taking place in January of '06?

21          A.       I do.

22          Q.       And why do you think that your time for the  
23                   hypothetical negotiation is more correct?

24          A.       Well, first, nothing in particular in terms of  
25                   manufacturing happened in January '06. So there is nothing

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1 about that date that is magical. There was a design  
2 document that was finalized then. But that is not a trigger  
3 for infringement.

4 The frames for Generation 2 and Generation 3 are  
5 identical. And CoreValve would have known, under our  
6 hypothetical, that if they make those, they would be  
7 infringing.

8 So they would sit there and say we are not going  
9 to build a plant to make something that is infringing. We  
10 are going to figure out what our alternatives are at that  
11 point.

12 That triggers the time period.

13 Q. You testified earlier that in looking at the  
14 hypothetical negotiation you looked at the cost to go  
15 overseas.

16 Let's put up Demonstrative 9.

17 Would you briefly explain what this is and how  
18 this impacted your determination of the reasonable royalty?

19 A. Yes. This is one page out of a large analysis.

20 What I did was consider two dates, fall of '04  
21 and spring of '05. I considered two possible locations,  
22 Singapore and Ireland, both of which were viable locations  
23 that Mr. Michiels talked about. There are others, but I  
24 just picked two.

25 And I looked at all of the costs that might be

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1 involved in moving: how much it takes for facilities, for  
2 equipment, to do some start-up manufacturing, and I then  
3 computed what is called the present value, an accounting  
4 term that says you compare them all on today's dollars so  
5 that you are not comparing 2009 dollars to 2010 dollars to  
6 2011 dollars. You are comparing them all in the same dollar  
7 value.

8 When you do that, you find the total costs in  
9 Singapore are actually less. If they had moved to  
10 Singapore, because Singapore is a lower-cost manufacturing  
11 location, they actually save money. That doesn't mean they  
12 would have done it immediately, because they liked Irvine.  
13 But they would have saved some money.

14 If they moved to Ireland, it would cost them  
15 some extra money. Then if they move a little later, in the  
16 spring of 2005, it cost them even more money, because,  
17 remember, they have to then spend that extra money for that  
18 contract manufacturing facility that will get them over the  
19 hump to get that facility up and running. And that cost  
20 them an extra few million dollars.

21 So when you get done, you find at the bottom  
22 there that, as a percentage of sales, in 2004, Singapore  
23 actually saves you about 3.6 percent of sales. Ireland  
24 costs you just about two percent of sales.

25 If you go to the same things in the spring of

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1     2005, Singapore saves you about 2.8 percent of sales, and  
2     Ireland costs you about two and three-quarters percent, 2.76  
3     percent of sales.

4     Q.     How did you use these percentages to determine what  
5     the reasonable royalty would be in this case?

6     A.     Well, I recognized that Singapore saves them money,  
7     and if they truly would have gone to Singapore, there would  
8     be zero reasonable royalty. Nobody would pay something just  
9     to go to Singapore, on the numbers. But there is still the  
10    hassle factor. There is still the fact they liked Irvine.

11           So I focused on the Ireland numbers, and talked  
12    about splitting the difference. This is about 2 percent,  
13    this 1.98. I said, what if we cut that in half and share  
14    it? You, Edwards, get half of our savings. We, CoreValve,  
15    keep the other half. That makes a one-percent royalty.

16           It's a little bit different in 2005. But I  
17    still have the Singapore numbers.

18           So in my judgment, one percent was a reasonable  
19    number for anywhere in this period. It basically shares the  
20    costs and says to Edwards, don't make us move overseas, we  
21    will pay you one percent to avoid the hassle of doing so.

22    Q.     Okay. So once you figured out that cost analysis,  
23    what did you next do in determining your reasonable royalty?

24    A.     I multiplied.

25    Q.     Before you get there, did you consider -- we heard

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1 from Dr. Leonard of the Georgia-Pacific factors, which are  
2 15 factors that courts consider in looking at a reasonable  
3 royalty. Did you look at all 15 of the Georgia-Pacific  
4 factors?

5 A. I did. I did that. Georgia-Pacific is a common basis  
6 for royalty.

7 This analysis I just talked about actually is  
8 part of the Georgia-Pacific analysis. I looked at all the  
9 other factors. But this really dominates the analysis.  
10 Everything else did not really have any impact as we are  
11 talking about.

12 Q. So if there is liability in this case, what is the  
13 reasonable royalty that you think applies?

14 A. One percent of sales based on this analysis.

15 Q. And then you said you multiplied it. What do you mean  
16 by that?

17 A. Well, you have to multiply the actual sales by one  
18 percent.

19 Q. Let's pull up Demonstrative 10. What is this?

20 A. The sales for CoreValve through December of 2009, as I  
21 mentioned, were about 120 million dollars. My reasonable  
22 royalty rate is one percent. This is not the hardest  
23 arithmetic. You take one percent of 120 million, and you  
24 get about 1.2 million dollars as the reasonable royalty.

25 Q. Okay. And that is looking at it as of the date of



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1       2004-2005. Right?

2       A.       That's if the hypothetical negotiation is in that time  
3       period.

4       Q.       Did you also do an analysis of the hypothetical  
5       negotiation if it took place at the date that Dr. Leonard  
6       used of 2006?

7       A.       I did. I changed the analysis for that.

8       Q.       If you could put up the rest of this.

9                       What is your conclusion if the hypothetical  
10       negotiation were in January of 2006?

11       A.       Well, if the negotiation is in that period, then it's  
12       a little harder for CoreValve. They are a little later. It  
13       means they will have some delay in getting their product on  
14       the market.

15                       Mr. Michiels talked about it being a couple  
16       months. I used three months delay. And that means they  
17       will lose some sales.

18                       They will also have to spend a little bit more  
19       to be overseas because they just have a little less time in  
20       which to operate, about six or eight months less than in my  
21       analysis.

22                       That will move the royalty rate -- that will  
23       move the expenses that CoreValve would be forced to endure  
24       up. And that will move the reasonable royalty up, because  
25       they are saying, we have to spend more, so we will pay you

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1 more to avoid the hassle.

2 That moves the royalty rate from one percent, in  
3 my opinion, to 1.5 percent. And that means a royalty of  
4 about 1.8 million dollars.

5 Q. That is assuming no lost profits in this scenario?

6 A. Yes. It is assuming some lost sales. That is, there  
7 are sales at the beginning that CoreValve can't get. But  
8 because of the early ramp-up issues, these are the very  
9 first few months that the parties are on the market, because  
10 of the ramp-up, there would be no lost sales that Edwards  
11 would get, even though there are sales that CoreValve would  
12 lose. That's taken into account in the 1.5 percent.

13 Q. You also testified earlier that you made some  
14 assumptions using Dr. Leonard's timeline and that you made  
15 some corrections and give Edwards some lost sales, it was  
16 about 900,000.

17 A. Yes.

18 Q. Do you have yet another alternative number -- let's go  
19 to Slide 11 -- if you accept that there might be some lost  
20 sales in using the January '06 starting date?

21 A. Yes.

22 Q. Would you explain very briefly what is shown here?

23 A. Yes. Again, this is December '09. Dr. Leonard's lost  
24 profits through that date are 60 million. He talked about a  
25 70-some-odd-million number, but that brings it through

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1 March. But I wanted to be fair and do a comparison of  
2 apples to apples. So 60 million of his is for the period  
3 before December of 2009. He set an eight-percent royalty  
4 rate. So he had some reasonable royalty on top of that.  
5 And he came up with about 62 million during that time  
6 period.

7 I compute, if you ignore the training issues and  
8 say that whatever CoreValve loses would be available for  
9 Edwards to possibly capture, that there would be \$900,000 of  
10 lost profits at the maximum. I then apply a royalty rate of  
11 one and a half percent, the one I just described a minute  
12 ago, to what's left.

13 That's another 1.8 million, for a grand total  
14 under that scenario of 2.7 million. That is the 1.8 plus  
15 the .9 number.

16 Q. Just to wrap this up, if we can go to Demonstrative  
17 12. These are combining the three scenarios that you just  
18 gave, no lost profits using hypothetical negotiation in the  
19 fall of '04 to spring of '05 of 1.2, no lost profits,  
20 hypothetical negotiation January of '06 of 1.8, and the  
21 correction of Dr. Leonard's analysis resulting in damages of  
22 2.7 million.

23 Of these three, which one do you believe is the  
24 correct damages number if liability is found in this case?

25 A. I believe it's the first one, because I believe that

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1 the period of time for the hypothetical negotiation is  
2 '04-'05. And that's the analysis that's based on the  
3 2004-2005 time, when the parties would recognize that they  
4 have to negotiate a royalty if infringement is assumed.

5 Q. And do you believe that that damages number, 1.2  
6 million, is a fair reflection of the cost to CoreValve and  
7 the hassle to move overseas?

8 A. Yes.

9 Q. Do you think that Dr. Leonard's 75-million-dollar  
10 number is a fair calculation of the cost and hassle for  
11 CoreValve to go overseas?

12 A. No. It just doesn't reflect what would have happened.

13 MS. WEIL: Thank you, Mr. Kinrich. I have no  
14 further questions.

15 THE COURT: All right, Mr. Blumenfeld.

16 Cross-examine.

17 MR. BLUMENFELD: Thank you, Your Honor.

18 Can we pass up cross-notebooks before we start.

19 THE COURT: You may proceed.

20 MR. BLUMENFELD: Thank you, Your Honor.

21 CROSS-EXAMINATION

22 BY MR. BLUMENFELD:

23 Q. Good morning, Mr. Kinrich. How are you today?

24 A. Good morning.

25 Hold on a second. Your notebook is falling

Kinrich - direct

1       apart. I want to keep it from exploding.

2       Q.       Sorry about that.

3               Mr. Kinrich, you are not an economist, are you?

4       A.       I am not an economist in the sense I don't have a  
5       degree in economics. What I do, because of finance,  
6       accounting, the other things, are things that are around the  
7       same area. But my degree is not in economics.

8       Q.       Now, you said that Dr. Leonard used numbers through  
9       trial and you used numbers through December 31st, 2009. Do  
10      you recall that?

11      A.       I do.

12      Q.       And you said that was because the parties only  
13      produced documents through December 31st, 2009. Right?

14      A.       Yes.

15      Q.       In fact, Edwards produced documents through February  
16      of 2010, and it was CoreValve that didn't produce documents  
17      after December 31st, 2009. Right?

18      A.       That's certainly possible. It's only CoreValve sales  
19      that are at issue here so the other wouldn't have come into  
20      play.

21      Q.       Right. And it was CoreValve that didn't produce its  
22      sales documents after December 31st, 2009. Right?

23      A.       I accept that. I don't remember specifically but that  
24      is certainly not inconsistent with what I reviewed.

25      Q.       Do you understand that the accused product here is the

Kinrich - direct

1      **Generation 3 device?**

2      A.      Well, yes and no. I heard in court that that is what  
3      people keep saying. But I also heard Dr. Buller say, and I  
4      read his report saying that the Generation 2 was also  
5      accused.

6      Q.      But you understand the damages you calculated were on  
7      sales of Generation 3 devices. Right?

8      A.      Well, yes, because Generation 2 devices weren't sold.

9      Q.      Correct. And you said a couple times in your  
10     testimony that the Generation 2 and Generation 3 frames were  
11     the same. Right?

12     A.      Yes.

13     Q.      There is more to the accused devices than the frames.  
14     Correct?

15     A.      I understand that, yes.

16     Q.      And you heard Mr. Michiels testify yesterday about all  
17     the differences in the leaflets and the skirts that happened  
18     between Generation 2 and Generation 3. Right?

19     A.      I did.

20     Q.      And you also heard him testify that Generation 3 was  
21     conceived in September 2005. Correct?

22     A.      I think the Summer of 2005, if that -- August or  
23     September. I don't know what he said but I've been working  
24     as if it was August or September, 2005.

25     Q.      You remember the pizza and beer lunch where Than

Kinrich - direct

1       Nguyen had the idea?

2       A.       I do.

3       Q.       And that was in September of 2005?

4       A.       Same answer. I think I remember it being Summer of  
5       2005. If it's September, I'm not arguing with you. I  
6       merely can't agree with you. All I remember is Summer.

7       Q.       Okay. And the Generation 3 design, you heard  
8       Mr. Michiels, say was frozen in early 2006. Correct?

9       A.       Yes.

10      Q.       Now, you said early in your testimony that the  
11      differences between you and Dr. Leonard were all in the  
12      timing. Right?

13      A.       I did say that. That's the major issue. There are  
14      certain other issues, and I talked about several of them.  
15      Timing generates a lot of them.

16      Q.       Let's look at your time line. I think it's  
17      Demonstrative 5 that you looked at. The Spring 2005. And  
18      on this time line, let's look at the real world on the  
19      bottom.

20                    You said the first manufacture of clinical grade  
21      Gen 2 was March 2005. Right?

22      A.       Yes.

23      Q.       You heard Mr. Michiels testify yesterday that that  
24      happened in April or May of 2005. Correct?

25      A.       I did. But I've seen the documents that says it was

Kinrich - direct

1 March.

2 Q. Actually, I think I got that wrong. I think you said  
3 May or June. But Mr. Michiels said May or June, you said  
4 March. Correct?

5 A. Yes.

6 Q. And then you said that the first manufacture of a Gen  
7 3 prototype was late Summer 2005. Correct?

8 A. Yes.

9 Q. And we heard yesterday Mr. Michiels say that it wasn't  
10 even conceived until that September launch in 2005.

11 Correct?

12 A. Which is not inconsistent since that is still late  
13 Summer.

14 Q. Well, that's conception. That is not manufacture.  
15 Correct?

16 A. My understanding that that is one followed closely on  
17 the other, but they were both consistent. And Mr. Michiels  
18 and I have been on the time line and concurred on the  
19 specifics.

20 Q. Well, you may have concurred with Mr. Michiels but  
21 that is not what he testified to yesterday.

22 A. Well, actually I disagree with you. I think that is  
23 very much what he said.

24 Q. And on the top half of this time line, you're assuming  
25 that the first manufacture of Gen 2 would have occurred in



Kinrich - direct

1 the United States. Correct?

2 A. It depends on which -- remember, I had two time lines.  
3 This is the one, Spring 2004 -- excuse me -- Spring 2005  
4 start date.

5 I gave one where all of the manufacture and R&D  
6 is overseas. That is one that starts in the Fall of 2004.

7 And the alternative is this one, which since the  
8 negotiation isn't until Spring, anything that happened up  
9 until then would have remained in the United States.

10 Q. Including first manufacture of Gen 2 prototype?

11 A. Correct. On this alternative.

12 Q. Right. Now, all these things that you put on the top  
13 in the but-for world, none of those happened. Correct?

14 A. Not by definition. That is the but-for world.

15 Q. Now, one of the assumptions you made was that these  
16 things that happened overseas could have happened in  
17 Singapore. Right?

18 A. Well, no, I did not assume they would happen in  
19 Singapore. There is one of many places they could have  
20 happened. I used Singapore and Ireland as examples. There  
21 are many other locations -- Canada, Italy, other places --  
22 that Mr. Michiels talked about and I have discussed with  
23 other CoreValve and Medtronic people.

24 Q. Right. You said you picked Singapore and Ireland as  
25 examples. Right?

Kinrich - direct

1 A. Yes.

2 Q. And those examples came from Mr. Michiels. Correct?

3 A. Well, I certainly didn't make them up. They were  
4 examples that were reasonable, realistic and likely  
5 alternatives. They were not the only likely alternatives.

6 Q. You didn't independently come up with the opinion that  
7 they could move to Singapore or Ireland. Right?

8 A. That's correct.

9 Q. That's outside the area of your expertise. Correct?

10 A. Yes. I would not know where to find heart valve  
11 manufacturing facilities. Mr. Michiels and numerous other  
12 people at CoreValve provided those locations.

13 Q. And you have no idea where a plant in Singapore would  
14 have been located, do you?

15 A. I have no idea of what the geography of Singapore is.

16 Q. You have no idea where in Ireland the plant would have  
17 been located?

18 A. Not in the sense of the city or town.

19 Q. And the cost of moving that you put up -- let's put up  
20 Slide 9. I think your Demonstrative Slide 9.

21 The cost that you put up here in 2004, 2005,  
22 those aren't costs you came up with either, are they?

23 A. No, they're costs that were developed at my request by  
24 people at CoreValve and Medtronic using their expertise in  
25 locating plants overseas from -- done by people whose job it

Kinrich - direct

1 is to locate plants overseas in Singapore and Ireland.

2 Q. The number on this chart are not numbers you  
3 developed?

4 A. I think I just answered that question to say, no, they  
5 are done by others who have the expertise in locating plants  
6 in these cities, these countries.

7 Q. Now, on the Singapore side of Demonstrative Exhibit 9,  
8 you said that if there had been a move in the Fall of 2004  
9 to Singapore, CoreValve would have saved between -- well,  
10 present value of almost \$10 million?

11 A. Yes. It would have cost them more to set up  
12 initially, which is the first line, the \$1,230,000 present  
13 value, but because the Singapore labor rates are cheaper,  
14 the actual cost of producing the valve after they get the  
15 setup would be cheaper. But it's more to make it -- to move  
16 and then less to manufacture.

17 Q. And if they had moved in Spring of 2005, they would  
18 have saved \$7 and-a-half million?

19 A. Right. Because, again, it's more to move and, in that  
20 case, it's even more to move because you have to spend some  
21 extra money on certain things because you have less time and  
22 so it costs you a little more money.

23 But, again, because the labor rates are cheaper,  
24 then you can save money on the manufacturing costs.

25 Q. And even though, in your opinion, CoreValve could have

Kinrich - direct

1 saved a lot of money by moving, it didn't move to Singapore.

2 Correct?

3 A. It didn't. And as I talked about, I didn't base my  
4 royalty on this partly because that didn't happen, although  
5 it was an option if they couldn't be in Irvine. It was, in  
6 fact, one of the most viable options if they couldn't be  
7 Irvine. But they wanted to be there, which is why I have a  
8 royalty greater than zero even though Singapore would have  
9 been a savings.

10 Q. Right. They wanted to be in Irvine. They could have  
11 saved money by moving to Singapore, they considered moving  
12 to Singapore, and they decided against it. Correct?

13 A. No, that's not true. They didn't consider moving to  
14 Singapore at the time. Had they considered it, they may  
15 very well have moved, but they were in a place. Just like I  
16 have a house, I can save money by moving to somewhere else,  
17 but I'm not moving. And there was no incentive for them to  
18 consider moving.

19 In the hypothetical, they have to consider  
20 moving. Once you have to consider moving, you then look and  
21 say what are my choices? Now that I have to do it, I have  
22 to go through the hassle of moving, I will then say maybe  
23 Singapore, maybe Ireland. Oh, look, Singapore would save me  
24 money. That is wonderful.

25 But they didn't consider it then. It wasn't

Kinrich - direct

1 something that was on their radar screen.

2 Q. Mr. Kinrich, they did consider it in 2008 and they  
3 rejected it. Right?

4 A. In 2008, for a different apples and oranges  
5 comparison. For a much bigger plant, they considered it,  
6 and instead built a plant where they already were.

7 Q. Now, the numbers on this chart, they were actually  
8 developed for Singapore by a Medtronic employee named  
9 Mr. McMATT (phonetic); correct?

10 A. Yes.

11 Q. And he developed that in 2009; correct?

12 A. With data. He developed it after I spoke to him,  
13 which was 2009. He did not develop it -- he developed it  
14 using 2006 information -- 2005 -- excuse me -- 2004-2005  
15 information, but he did the work at my request in 2009.

16 Q. And he is not coming to trial to testify about what he  
17 did. Right?

18 A. That's my understanding.

19 Q. And you are just accepting his numbers. Correct?

20 A. Well, I am accepting them after examining them. I  
21 didn't just say give me the numbers, they're fine.

22 I had discussions with him. I challenged them.  
23 I asked for support. I looked at the analysis. I figured  
24 out how he did it. I figured out what he knew. I figured  
25 out who he knew in Singapore and how he developed those

Kinrich - direct

1 numbers. And then I used them going forward.

2 Q. And Mr. McMatt was not a CoreValve employee in 2004 or  
3 2005, was he?

4 A. That's correct. He was at Medtronic, which is where  
5 the expertise in this lies.

6 Q. And Medtronic is, and was in 2004 and 2005, a lot  
7 bigger company than CoreValve?

8 A. It was a bigger company. That didn't affect the  
9 analysis, but because he did it for a small company, not for  
10 a Medtronic-sized company.

11 Q. And he didn't talk to anyone at CoreValve about this  
12 analysis, did he?

13 A. I don't remember whether he did or didn't.

14 Q. And you didn't talk to anyone at CoreValve about this  
15 analysis except for Mr. Michiels; correct?

16 A. Yes, Mr. Michiels was my prime contact at CoreValve.

17 Q. Now, on this Spring 2005 side, whether it's Ireland or  
18 Singapore, you have, up front, incremental costs of about  
19 \$2 million. Right?

20 A. Yes.

21 Q. And that meant \$2 million that had to be available in  
22 the Spring of 2005. Right?

23 A. Yes.

24 Q. And could you turn to PX-1900? It's Tab 8 in the book  
25 that you have.

Kinrich - direct

1 A. I'm sorry. Could you give me the tab number again?

2 Q. Eight.

3 A. (Witness complies.)

4 Q. This is CoreValve's financial report from April of  
5 2005. Correct?

6 A. Yes.

7 Q. Spring of 2005. Right?

8 A. Yes.

9 Q. And if you turn to Page 4.

10 A. Hold on.

11 Got it.

12 Q. And we look right down here at the bottom, it has  
13 CoreValve's cash and cash equivalents at the end of the  
14 period. And that's the period ending April 30th, 2005.  
15 Right?

16 A. Yes.

17 Q. And their cash and cash equivalents were about, --  
18 this is in Euros -- about 400,000 Euros. Right?

19 A. I will accept your word that it's in Euros. That  
20 makes sense to me. I don't see that but I certainly accept  
21 that.

22 Q. And 400,000 Euros would have been 500,000 and some  
23 dollars?

24 A. 600,000, I think about then.

25 Q. Between 500,000 and 600,000?

Kinrich - direct

1 A. Something like that.

2 Q. So that was the cash that the company had on hand in  
3 April of 2005. Right?

4 A. Yes.

5 Q. And then if you turn to Page 10 of this document.

6 A. (Witness complies.)

7 Q. Do you see there is a chart called -- I'm sorry --  
8 Page 11. Do you see there is a chart called CoreValve cash  
9 indicator. And what it shows, in Euros again, for  
10 April 2005, is something under 500,000, and from May 2005  
11 going down to zero. Correct?

12 A. That appears to be a projection. But, yes, I see  
13 that.

14 Q. And that is the amount of cash that CoreValve had on  
15 hand in April and May of 2005. Right?

16 A. Yes. It didn't need the amount of cash at the point  
17 you are talking about. This is what it had then. You have  
18 more cash immediately thereafter. But, yes, that is  
19 correct.

20 Q. Now, it had more cash later, but it didn't have the  
21 cash in April and May of 2005?

22 A. Right. But it didn't need it then either.

23 Q. Now, you talked a little bit about capacity. The  
24 documents you pointed to were all in a world where CoreValve  
25 was a competitor with Edwards. Right?



Kinrich - direct

1 A. Yes.

2 Q. And you understand of the centers that do this type of  
3 procedure, there are bigger centers and smaller centers.  
4 Right?

5 A. I do.

6 Q. And if CoreValve had not been in the market, it  
7 wouldn't have gotten into the centers it got into. Correct?

8 A. Well, if I understand your question, by definition, if  
9 CoreValve is not on the market it wouldn't be in certain --  
10 in those centers. It wouldn't have any business at that  
11 point.

12 Q. And that would have included the bigger centers in the  
13 market. Correct?

14 A. It would be all of them, if your hypothetical is that  
15 they wouldn't be in the market.

16 Q. Including the bigger centers?

17 A. All of them.

18 Q. Now, you know that CoreValve has sold roughly  
19 \$150 million of Gen 3 devices to date.

20 A. I know they sold about \$120 million through December.  
21 I think it's probably reasonable to believe it's probably  
22 something on that order through today, though I don't have  
23 those numbers.

24 Q. And you know that Medtronic has paid \$700 million to  
25 acquire CoreValve?

Kinrich - direct

1 A. I do.

2 Q. And it's your opinion that damages through the end of  
3 last year were \$1.2 million. Is that right?

4 A. Yes. It's all based on simply moving overseas. It's  
5 not about making the product, itself. If it were the  
6 product, it would be much higher. But because it's all  
7 about moving and all about hassle, it's obviously not  
8 anywhere close to the total amount of the sales or profits  
9 that were made. It's just the cost of getting to another  
10 geography.

11 Q. And you know that that \$1.2 million that CoreValve --  
12 that you say is an appropriate royalty is far less than  
13 CoreValve has paid in attorney fees in this case. Correct?

14 MS. WEIL: Objection.

15 THE COURT: Let me see counsel.

16 (The following took place at sidebar.)

17 THE COURT: Read back the question.

18 (The court reporter read back the requested  
19 information.)

20 THE COURT: The objection is?

21 MS. WEIL: It's relevance and 402, 403.

22 MR. BLUMENFELD: I think it's perfectly relevant  
23 where he is coming up and saying here is a number they would  
24 have agreed to pay, and instead they didn't move overseas,  
25 and they chose to pay more attorney fees than the amount

Kinrich - direct

1 that they would have agreed to in a hypothetical  
2 negotiation. It's another cost.

3 THE COURT: Well, but this -- how would this  
4 witness know what CoreValve has paid in attorney fees?

5 MR. BLUMENFELD: Just from his experience in  
6 litigation. He does this for a living. If he says he  
7 doesn't know, that's fine. But ...

8 THE COURT: Well, you can ask him if he knows,  
9 but you don't want to say --

10 MS. WEIL: I think it's 402, 403. I mean --

11 THE COURT: Don't just recite numbers. What do  
12 you mean?

13 MS. WEIL: I understand. Thank you.

14 The amount of money that is spent on attorney  
15 fees is not a consideration for determining reasonable  
16 royalty. There is no support for that at all. There are  
17 reasons to fight a lawsuit that have nothing to do with  
18 moving overseas. There has been testimony that throughout  
19 CoreValve thought there was no liability, so there was no  
20 reason for it to pick up and move overseas.

21 THE COURT: Now I'd made a record, counsel.  
22 Sustained.

23 MS. WEIL: Okay.

24 (Sidebar conference ends.)

25 MR. BLUMENFELD: I have no further questions.

Kinrich - redirect

1 THE COURT: All right. Your redirect.

2 MS. WEIL: Mr. Hugo, could you put up  
3 Demonstrative 9, please.

4 REDIRECT EXAMINATION

5 BY MS. WEIL:

6 Q. Mr. Kinrich, Mr. Blumenfeld asked you some questions  
7 about CoreValve's money that it had in the bank. Do you  
8 recall that testimony?

9 A. I do.

10 Q. Okay. In evaluating whether, in this but-for world  
11 that didn't exist, CoreValve could have moved overseas and  
12 spent the money that is shown on Demonstrative 9, did you  
13 consider whether CoreValve could have afforded to make this  
14 move?

15 A. Yes, I did.

16 Q. And what did you learn and what did you conclude from  
17 that investigation?

18 A. That prior counsel was correct that they don't have  
19 that cash at that date, but just because it says present  
20 valve doesn't mean you spend it all on that day. You spend  
21 it over time. That's simply the present value as if you  
22 ready had it then. But if you spend it over a year or two  
23 or three to do the equipment, or, in this case, maybe a year  
24 or so, not two or three, and the funds that CoreValve had  
25 available to it increased right after this period, and they

Knudsen - depo.

1 had enough funds to do the expenditures that would have been  
2 forecast; further, Mr. Michiels has explained that had they  
3 needed more funds, their investors were not stupid. The  
4 investors were not to going to say we're not going to give  
5 you a couple hundred thousand dollars for an investment we  
6 hope will pay off quite well. That they would be able to  
7 raise this money even if they needed it, but it turns out  
8 they didn't need it.

9 MS. WEIL: Thank you. I have no further  
10 questions.

11 THE COURT: Thank you. You are excused.

12 THE WITNESS: Thank you.

13 (Witness excused.)

14 MR. VAN NEST: Good morning, Your Honor. At  
15 this time, we're going to play some additional testimony  
16 from Dr. Knudsen, one of the inventors of the '552 patent.

17 In this testimony, Dr. Knudsen is going to  
18 discuss the prototypes that he used in the early pig  
19 experiments and his paper describing those experiments.

20 THE COURT: Thank you, Mr. Van Nest.

21 (Video of Dr. Knudsen played.)

22 "Question: Could you describe to me what the  
23 first prototype looked like?

24 "Answer: Yes. Do you want me to show pictures?

25 "Question: I'll let you draw it on this paper.

Knudsen - depo.

1                   "Mr. Re: I will mark a plain piece of paper as  
2                   our next exhibit, Exhibit 68, on Radisson Hotel and Resorts  
3                   graph paper.

4                   "That might help you describe to me -- here we  
5                   go. Have a nice marker.

6                   "If you could draw for me what you remember the  
7                   first prototype, what it looked like, that you and your  
8                   colleagues made in 1989?

9                   "Answer: Yeah. You know, it's a process when  
10                  you make things like this. So when you mean prototype, you  
11                  mean the one we designed for implantation?

12                  "Question: For whatever purpose you had. What  
13                  did the first physical specimen look like that was made by  
14                  you and your colleagues?

15                  "Answer: Oh, okay. You know, we tried some  
16                  forms, right. We were thinking of a lot of things at that  
17                  time.

18                  "Question: Mm-hmm?

19                  "Answer: But the first one -- well, it was a  
20                  process. It's very difficult to answer exactly. But the  
21                  first one was looking -- we remember actually thinking of a  
22                  lot of things, too, at the same time. So as far as I recall  
23                  was that we -- the first one was -- it's just -- no, I  
24                  cannot -- to be honest, there was a couple, but I cannot say  
25                  absolutely which one it was.

Knudsen - depo.

1 "Question: Draw them both. Do the best you can  
2 to the extent you can really recall. And if you can't  
3 recall, just draw what you can recall.

4 "Yeah, if you can't recall the entire design,  
5 draw the parts that you can recall.

6 "Answer: Yeah.

7 "Question: So if you drew a loop, you are going  
8 to say, okay?

9 "Answer: Yeah, I think the first one was like  
10 this, you know, it was a long wire. Okay? Going like this.  
11 And then it was -- I think it was welded together here at  
12 the end.

13 "Question: Okay.

14 "Answer: I think the first one looked like  
15 that.

16 "Question: What do you call these tall loops at  
17 the top of Exhibit 68?

18 "Answer: Well, we call -- I think we call it  
19 commissures or towers.

20 "Question: Or towers. Is that what you said?

21 "Answer: Yeah, you can call it a tower.

22 "Question: Do you recall how many commissures  
23 or towers that you had on your --

24 "Answer: Three.

25 "Question: Three?

Knudsen - depo.

1 "Answer: Do you want me to do it exactly?

2 "Question: Sure.

3 "Answer: It was just a cartoon. I can't do  
4 it -- I have to look at it in the notes to get the real one.

5 "Question: So if I understand your testimony  
6 this morning, your recollection -- your recollection is that  
7 all of the prototypes were made with three commissures or  
8 towers similar to what you've drawn on Exhibit 68 and shown  
9 on Edwards 60256?

10 "Answer: Yes. It's because, you know, we made  
11 this one for experiments, right? And we decided on the  
12 design. And then we tested this design, okay?

13 "So it was what was available at that time.

14 "Question: Could you identify Exhibit 72?

15 "Answer: Yes, this looks like my final thesis  
16 for university.

17 "Question: This is the final?

18 "Answer: Yeah.

19 "Question: Okay. 'The stainless surgical steel  
20 .55-millimeter wire had the properties expected in the form  
21 of site spontaneous elasticity and contraction recoil after  
22 compression and expansion.'

23 "Do you see that?

24 "Answer: Mm-hmm.

25 "Question: Do you know why .55-millimeter wire



Knudsen - depo.

1 was selected?

2 "Answer: Because that's what was available at  
3 the time, and I was -- you know, we could use it.

4 "Question: Did you try --

5 "Answer: Yeah, we tried a little thinner one  
6 and thicker one, and we felt this one was the right one.

7 "Question: Okay. What was wrong with the  
8 thinner one?

9 "Answer: The thinner one was too wobbly.

10 "Question: Too wobbly?

11 "Answer: Mm-hmm.

12 "Question: Unstable?

13 "Answer: Uh-huh, how you say --

14 "Question: Weak?

15 "Answer: Yeah. When you -- when you want to --  
16 you have to be -- it has to be expandable and collapsible,  
17 okay?

18 "And then if the weak hole is too much, you  
19 know, you could say it was weak in your terminology, then it  
20 would collapse again. And if it was too thick, it was -- it  
21 was too hard to expand.

22 "Question: I'd like to take you back to your  
23 Exhibit 72, which is your 1992 paper.

24 "Answer: Yes.

25 "Question: And I'm reading the section that

Knudsen - depo.

1       says 'The experiments undertaken are of the nature of a  
2       preliminary technical investigation and many important  
3       questions still remain open, questions such as size  
4       reduction, material and design optimization, and stent valve  
5       sterilization, remain unsolved.'

6                "Do you see that?"

7                "Answer: Mm-hmm, yeah."

8                "Question: Did you and your colleagues ever  
9       attempt to resolve any of those important questions that  
10      still remain open as referred to by you on Page 307615?"

11               "Answer: Not to my knowledge after I read this,  
12      no."

13               "Question: No?"

14               "Answer: No, no."

15               "Question: Did you in any way make any changes  
16      to your prototypes to account for the difference in human  
17      and pig aortas?"

18               "Answer: No."

19               "Question: Well, I'm trying to explore the fact  
20      that when you wrote this paper, and you recognized much more  
21      work had to be done. Correct?"

22               "Answer: Yes."

23               "Question: And much more work had to be done  
24      before anybody ever even contemplated using this for a  
25      human. Correct?"

Knudsen - depo.

1 "Answer: Yes.

2 "Question: And did you have any intention that  
3 you and your colleagues would try to tackle any of the major  
4 problems that still remained for your prototype to have any  
5 value in a human?

6 "Answer: As I told you before, we made an  
7 experiment, right, where we did these -- or we made  
8 experiments and we made these experiments with the available  
9 material we had at that time. Okay?

10 "We didn't have an economy to test heart valves  
11 for human implantation. Because we know although it's a  
12 long list of things you have to approve, have approved,  
13 okay, and, you know, you have to have sterilization  
14 procedures, and, you know, and -- but the issue was that we  
15 made this stent valve and could implant it in our pig model.

16 "But we were aware that, of course, something  
17 about the perfection of the valve, stent valve, before  
18 commercialization should, okay, it should be done -- sure,  
19 it should have sterilization procedures and it should be  
20 minimized as I wrote down there.

21 "Question: Okay. But did you also realize that  
22 you didn't just need to do additional study, there also had  
23 to be some design modifications to make your prototypes  
24 smaller for it to have any applicability for humans?

25 "Answer: Yes.

Knudsen - depo.

1 "Question: You understood that. Right?

2 "Answer: Yes."

3 MR. VAN NEST: Your Honor, at this time we are  
4 going to play some testimony from Stan Rowe. Stan Rowe was  
5 one of the founders of PVT. And he will discuss PVT's  
6 efforts to develop a transcatheter heart valve replacement.

7 "Question: Good morning, Mr. Rowe. Could you  
8 state your full name for the record, please?

9 "Answer: Stanton Jeffrey Rowe.

10 "Question: What do you currently do at Edwards?  
11 What is your current job responsibility?

12 "Answer: I develop products, and I oversee at  
13 least to some extent the development process and services  
14 for Edwards Lifesciences.

15 "Question: And for how long have you been doing  
16 that at Edwards?

17 "Answer: My current role -- well, I was made  
18 chief scientific officer late last year, so that -- I'm not  
19 sure that fundamentally changed my responsibilities, but at  
20 some level I'm probably more involved with other divisions  
21 due to that. But generally I've had the role of running  
22 Advanced Technology since late '07.

23 "Question: I'd like to take you to what is now  
24 Exhibit 104, particularly Page 7, which is Page 7, which is  
25 Edwards 58900.

Rowe - depo.

1 "Answer: Okay. Got it.

2 "Question: It's called Andersen Patent

3 Limitations. Do you see that?

4 "Answer: I presume it says limitations, but  
5 yes.

6 "Question: I'd like to ask you about the next  
7 bullet. It says, 'The cylindrical support for the valve is  
8 described as .55-millimeter stainless wires.'

9 Do you see that?

10 "Answer: Yes.

11 "Question: 'These lack sufficient strength to  
12 oppose a stenotic valve placement site.'

13 "Can you just explain to me what you're  
14 conveying in your presentation to Evergreen by that third  
15 bullet in this Exhibit 104?

16 "Answer: I'm conveying my opinion that the  
17 diameter of these wires was insufficient to prevent or to  
18 hold open a stenotic valve.

19 "Question: And how did you know that at the  
20 time you wrote this?

21 "Answer: I didn't know it. It was my belief.

22 "Question: You didn't know it, you said?

23 "Answer: No, I didn't know it.

24 "Question: Why would you write such a thing if  
25 you didn't know it?

Rowe - depo.

1 "Answer: It was my opinion.

2 "Question: It was your opinion based on what?

3 "Answer: Thinking about the stents that he  
4 designed. I mean, I do believe I was probably wrong. I  
5 don't know that this statement is correct in any way, shape  
6 or form, but it was my opinion at the time.

7 "Question: When did you come to the belief that  
8 you think you were probably wrong?

9 "Answer: Well, if I think today about again the  
10 thickness of the Palmaz stent and the thickness of the PVT  
11 stent, they are all around .5 millimeters.

12 "Question: But those are completely different  
13 designs, aren't they?

14 "Answer: Well, they are different designs, but  
15 I'm referring specifically to the diameter of stainless  
16 steel wires.

17 "Question: No, but you're referring to the  
18 diameter of stainless steel wires using the cylindrical  
19 support design shown in the Andersen patent, aren't you?

20 "Answer: Again, it's hard to figure out if  
21 you're talking about the cylindrical support. These are  
22 stainless steel wires. You can configure these a lot of  
23 different ways. How many different ways did Dr. Andersen  
24 configure stainless steel wires?

25 "Question: I know the answer to that question.

Rowe - depo.

1 "Answer: I don't.

2 "Question: I am asking you, isn't it true on  
3 this bullet, and you're referring to the thickness of the  
4 stainless steel wires as constructed pursuant to the design  
5 Dr. Andersen showed in his patent. Isn't that correct?

6 "Answer: I'm not sure that that is correct.

7 "Question: Why are you not sure?

8 "Answer: Well, again, because you are asking me  
9 to affirm what I was thinking over nine years ago.

10 Q. If you don't know, you can say, I have no idea. That  
11 would be fine.

12 "Answer: I'm saying I can't really answer that  
13 question. I can't tell you specifically what was in my mind  
14 when I wrote that sentence.

15 "Question: Okay. No recollection?

16 "Answer: I can't answer the specific question  
17 you answered.

18 "Question: Do you have any recollection as to  
19 what design you're referring to as lacking sufficient  
20 strength to oppose a stenotic valve placement site?

21 "Answer: No.

22 "Question: No recollection?

23 "Answer: This was my criticism of the Andersen  
24 technology in general at that time.

25 "Question: Correct. And for how long did you

Rowe - depo.

1 have this criticism of the Andersen technology?

2 "Answer: That's an interesting question. I  
3 don't think that -- again, I sought the Andersen license  
4 months after this.

5 "Question: I bet it was months after this. I  
6 agree with that.

7 "Answer: And paid a fortune for it because I  
8 believed that it was going to be extremely valuable and that  
9 it was an important guide to us and that we were practicing  
10 it. So I can only say that this view of limitations had to  
11 be passing, meaning a short period of time.

12 "Question: Now, I think you played a little bit  
13 of a patent lawyer on me in that last answer. I was  
14 referring to just the technology, not the legal rights that  
15 may accompany the Andersen patents. So let's talk about the  
16 design itself. The design of the Andersen stent as shown in  
17 his patent, were you referring to that design on this page  
18 of Exhibit 104? Yes or no.

19 "Answer: I can't answer that question.

20 "Question: Because you lack recollection?

21 "Answer: Yes.

22 "Question: How did you come across the  
23 thickness of the stainless steel wire as being .55  
24 millimeters?

25 "Answer: I don't recall.



Rowe - depo.

1 "Question: You don't recall where that number  
2 came from?

3 "Answer: No, I don't.

4 "Question: No recollection?

5 "Answer: No.

6 "Question: Let's go to the last entry. It  
7 says, 'Dimensions specified are much too large for  
8 percutaneous placement (ten-millimeter diameter).'

9 "Do you recall what you were referring to by  
10 that bullet in your presentation to Evergreen in Exhibit  
11 104?

12 "Answer: Generally, yes. Again, Dr. Andersen's  
13 technology as he was able to configure it at that time would  
14 have been very challenging to put in, at least in a large  
15 number of patients in a percutaneous method.

16 "Question: And why was it very challenging?

17 "Answer: Because not many patients have  
18 ten-millimeter vessels.

19 "Question: Why?

20 "Answer: Because it is easier to close the  
21 vessel, and you can treat a larger number of patients the  
22 smaller it is.

23 "Question: Where did you come across the  
24 ten-millimeter diameter measurement?

25 "Answer: I don't know. I don't recall.

Rowe - depo.

1 "Question: If the valve prosthesis is  
2 approximately ten millimeters when fully compressed, is that  
3 small enough to be used percutaneously in humans?

4 "Answer: I believe it would be possible in some  
5 patients and in some etiologies, yes.

6 "Question: In fact, you then continue with your  
7 position, 'I think the description that Dr. Andersen  
8 provided to us when we were designing the product of PVT was  
9 invaluable.'

10 "Answer: Uh-huh.

11 "Question: Do you have any document, sir, that  
12 ever shows your opinion that the Andersen disclosure was  
13 invaluable?

14 "Answer: No.

15 "Question: When was the first time you ever  
16 attributed to Dr. Andersen as having provided an invaluable  
17 disclosure in his patent?

18 "Answer: Well, it seems like it would be clear  
19 that if we -- I'm going to try to answer you.

20 "Question: I think my question started with a  
21 when.

22 "Answer: Would you please state the question  
23 again.

24 "Question: When was the first time that you  
25 ever attributed to Dr. Andersen as having provided an

Rowe - depo.

1       invaluable disclosure in his patents?

2                   "Answer: So my best answer to you would be  
3       December 21st, 2000.

4                   "Question: The day PVT purchased the license?

5                   "Answer: Yes.

6                   "Question: My question related to the  
7       disclosure, not to the legal rights that you purchased under  
8       the patent.

9                   "Answer: Yes, but -- I understand. But it's  
10       hard. Again, we put our money where our mouth was. Okay?  
11       So if we didn't think Andersen was not something that we  
12       were going to practice, okay, we got 5.5 million in Series  
13       A. We spent almost 20 percent of that on buying a patent.  
14       Okay?

15                   "Question: Buying the legal rights?

16                   "Answer: Buying the rights to the Andersen  
17       patent with the promise of paying him two million more. And  
18       we were going to give him a percentage of the company. So  
19       it was a huge investment for a company to make at that  
20       stage, but we believed we were going to practice Andersen  
21       because we were guided by Andersen. And so my answer to you  
22       is, we bought this patent because it was our guide and  
23       because we thought it was extremely valuable for the company  
24       to own as a guide to develop percutaneous heart valves.

25                   "Question: Was it really as a guide, or was it

Rowe - depo.

1 because you wanted the legal rights represented by the  
2 Andersen patent?

3 "Answer: Well, we followed it -- look, the fact  
4 that we were practicing it was a guide that we practiced it,  
5 and therefore we needed to purchase it or have rights to it.  
6 Okay? The form of those rights, okay, you can argue, well,  
7 if you had nonexclusive rights, that would have been fine.  
8 Okay? But okay, but we --

9 "Question: Correct. I think that was one good  
10 point. I wasn't even thinking of that, but you make a good  
11 point.

12 "Answer: But we felt we needed to own rights to  
13 practice it. Okay? So the optimal way to practice that is  
14 to have exclusive rights, right? Because we are investing  
15 our time, our money, our careers in developing this  
16 technology, so the optimal way is to own exclusive rights.  
17 But one way or the other we knew, we voted with our money  
18 and our actions. So when you say what documents do we have  
19 to show for it, I would say the Andersen license is the best  
20 document I could tell you we have, and the date of that is  
21 December 21st, 2000.

22 "Question: Did you prepare Exhibit 112?

23 "Answer: Yes.

24 "Question: Does it look like you prepared this  
25 in or about February of 2000?

Rowe - depo.

1 "Answer: Yes.

2 "Question: I'd like to take you to the front  
3 page of this document where you write, 'Andersen sadly does  
4 not describe a method or design that if constructed is  
5 percutaneous and functional over any durable period.'

6 "Do you see that?

7 "Answer: No. Where is that?

8 "Question: Third paragraph, second-to-last  
9 sentence.

10 "Answer: Yes.

11 "Question: What were you trying to convey with  
12 that sentence to potential investors?

13 "Answer: Well, we have to develop a durable  
14 product to be commercial for one thing. And we need to  
15 reduce the diameter I think to create a commercial product.

16 "Question: Anything else?

17 "Answer: That's it.

18 "Question: What were you intending to convey by  
19 the use of the word 'sadly'?

20 "Answer: It's going to take money.

21 "Question: It's going to take money to do what?

22 "Answer: To develop this.

23 "Question: To make a method or design that if  
24 constructed is percutaneous and functional over any durable  
25 period?

Rowe - depo.

1 "Answer: It's going to take development money  
2 to, you know, refine this to a point where it's commercial,  
3 and that means proving durability and working to reduce its  
4 size to address a broader population.

5 "Question: That's what you meant by that  
6 sentence?

7 "Answer: Yes, I believe so.

8 "Question: I would like to mark as our next  
9 exhibit a multi-paged document bearing the production number  
10 of Edwards 133069 running consecutively through 133086.

11 "This will be Exhibit 161.

12 "Could you identify Exhibit 161?

13 "Answer: Is this the entire document?

14 "Question: Are you suggesting that it was part  
15 of something else?

16 "Answer: It looks like a design review, but it  
17 doesn't look like the front cover page on this. So my best  
18 answer is it looks like a design review document.

19 "Question: And the design review documents,  
20 what were their purposes?"

21 "Answer: For the entire team to get together  
22 and review the current design concepts and issues and make  
23 decisions about which design approaches we would take.

24 "Question: And from looking at this document,  
25 you can't date it?

Rowe - depo.

1 "Answer: Well, within some range I can date it,  
2 Mr. Re.

3 "Question: Okay. Whatever range you can get is  
4 what?

5 "Answer: Somewhere between August of 2000 and  
6 December of 2001. I would tend to favor that it's later  
7 rather than earlier.

8 "Question: I want to take you back to  
9 Exhibit 163. And I want to direct your attention to, under  
10 4.3, it refers to stent protrusions. On Page 4 of  
11 Exhibit 163.

12 Do you see the section under, 'Stent,' the last  
13 sentence. 'We also found that in such strut thickness, the  
14 stent protrusions, which were designed to support the valve,  
15 bend in result of the hydraulic pressure and don't fulfill  
16 their function.'

17 "Do you see that?

18 "Answer: Yes.

19 "Question: What is referred to as the stent  
20 protrusion?

21 "Answer: I believe that those are the three  
22 projecting apices that -- yes, that you can see on the first  
23 page of 161.

24 "Question: And that is in the middle picture?

25 "Answer: That's correct.

Rowe - depo.

1 "Question: The lower middle picture. There is  
2 three apices. Is that what you are referring to?

3 "Answer: Yes.

4 "Question: Okay. I notice on Page 6, under  
5 Section 5.2 entitled, "Stent Conclusion From First Design  
6 Iteration," it states "we prefer not to have protrusions,  
7 i.e., have a cylindrical shaped stent."

8 "Do you see that?

9 "Answer: Yes.

10 "Question: Do you know what is being referred  
11 to by that sentence?

12 "Answer: Yes. Although it's not  
13 extraordinarily clear.

14 "Question: Okay. But let me just ask you: Why  
15 was there a conclusion not to have protrusions?

16 "Answer: Well, because at the desired  
17 thicknesses, you could -- again, this is about optimization.  
18 So at the thicknesses that they were testing here, the  
19 protrusions are basically -- the apices are cantilever  
20 beams. They are like a diving board. Right? And so they  
21 cannot bear the same weight without support. Okay?

22 "And the engineers had developed some kind of  
23 test. I don't know specifically how much load they were  
24 placing on the stents because we don't know even to this day  
25 the appropriate load. But when they stress the stent, they



Rowe - depo.

1 note that those apices, those protrusions bend inwardly,  
2 which affects valve function. So their conclusion was that  
3 the valve protrusions would be attached to the inner part of  
4 the cylindrical stent.

5 "So you think of it as one or two ways. You can  
6 take the apices and move them down into the stent design, or  
7 you move the stent design up to support the three apices.  
8 So either way you get the same effect, but you increase the  
9 load-bearing capability of the valve.

10 "Question: And so after the first design  
11 iteration, were there any more designs where the apices were  
12 part of the stent as shown in the first design iteration?

13 "Answer: So the -- after this design, the --  
14 you have -- the three protrusions were moved into the stent  
15 structure.

16 "Question: Can you show me a picture on  
17 Exhibit 161 where that is shown?

18 "Answer: In 161?

19 "Question: Yeah. There are some pictures on  
20 the front. Or if you look at 164.

21 "Answer: I think, I mean, I would contend that  
22 the valve in the upper left of 161 represents this same  
23 concept that the three apices are now supported by upper  
24 struts.

25 "Question: As opposed to having the stent

Rowe - depo.

1       itself form the cantilever?

2                   "Answer: As opposed to the cantilever being  
3       free, the cantilever is supported. So this is a better  
4       load-bearing structure.

5                   "Now, you could do it other ways, okay? We  
6       could have chosen to probably support the cantilevers  
7       through thicknesses or other mechanisms, but this was a  
8       simple iteration to preserve the apices within the stent.

9                   (Video ends.)

10                  MR. VAN NEST: I believe we're ready to call our  
11       next live witness, Your Honor.

12                  THE COURT: All right. Why don't we take our  
13       morning break then.

14                  (Brief recess taken.)

15                  THE COURT: Do we have an additional witness?

16                  MR. FERRALL: We do have one more witness, Your  
17       Honor.

18                  THE COURT: Let's bring in the jury.

19                  (Jury enters courtroom at 11:18 a.m.)

20                  THE COURT: Please, ladies and gentlemen, take  
21       your seats.

22                  Mr. Ferrall.

23                  MR. FERRALL: Thank you, Your Honor. CoreValve  
24       calls as its next witness Dr. Martin Rothman.

25                  ... MARTIN ROTHMAN, having been duly sworn as a

Rowe - depo.

1 witness, was examined and testified as follows ...

2 MR. FERRALL: With the Court's permission, I  
3 would like to do my morning exercise and place the board  
4 there. Thank you.

5 DIRECT EXAMINATION

6 BY MR. FERRALL:

7 Q. Good morning, Dr. Rothman.

8 A. Good morning.

9 Q. Can you please introduce yourself to the jury?

10 A. Yes. My name is Martin Rothman. I am another  
11 cardiologist from London, England.

12 Q. Are you testifying as an expert witness today in the  
13 case?

14 A. I am.

15 Q. Can you tell us what your field of expertise is?

16 A. Today I would be called an interventional  
17 cardiologist. That is somebody who repairs or opens narrow  
18 channels in the coronaries of the heart using balloons and  
19 stents.

20 I also close holes in the heart, and actually  
21 also do valve replacements of the type we are talking about  
22 today.

23 Q. Can you tell the jury a little bit about your personal  
24 background, where you grew up and so forth?

25 A. Yes. I am a Londoner. I have lived and worked in

Rothman - direct

1 London most of my wife. I have only one wife and three  
2 children.

3 My oldest child is actually training to be a  
4 cardiologist. I have tried to put him off, but that has  
5 failed.

6 My eldest daughter is actually an opera singer  
7 trainee, strangely enough.

8 Q. How did you get interested in medicine?

9 A. Well, looking at me, you wouldn't believe it. But I  
10 used to be quite a sportsman. I used to break everything.  
11 I played basketball and broke all my fingers, and various  
12 other limbs at various times. I went to the hospital quite  
13 a lot. I quite liked what they did and the service I got.

14 I thought, naively, that's what I wanted to do.  
15 But subsequently, when I got into training, I really found  
16 out that I really enjoyed helping people. And cardiology  
17 was my particular chosen area.

18 That was probably reinforced, when I was  
19 actually doing cardiology, as a junior adult, my father had  
20 a heart attack at age 54 and subsequently died. It sort of  
21 reinforced my interest in the subject.

22 Q. Where did you attend medical school?

23 A. I attended medical school in Manchester, which is in  
24 the north of England. And it's also where my favorite  
25 soccer team, Manchester United, where David Beckham comes

Rothman - direct

1 from, is.

2 And I then went on to various institutions in  
3 England, in London, on the South Coast in Brighton, back to  
4 London, and then over to the USA for training and a  
5 fellowship at Stanford University in California.

6 Q. What did you focus on in your fellowship at Stanford?

7 A. That was 1980. So that was the beginning era of  
8 balloon angioplasty, stretching balloons, narrowing in  
9 coronary arteries.

10 When I went to Stanford, I joined up with the  
11 staff cardiologist who was doing angioplasty. He had done  
12 25 when I arrived. That was sort of the first 25 in  
13 America, virtually. I worked with him for two, two and a  
14 half years. And by the time I left we had done 75.

15 Slow progress. But we did quite a lot of  
16 research on the process, the effects on the heart of doing  
17 angioplasty. And we published quite a lot of work on that.

18 Those were my main areas. And also, if you  
19 like, the metabolism or the feeding habits of the heart at  
20 rest and under stress.

21 Q. Have you had a role in developing any cardiological  
22 practices or procedures in the U.K. during the course of  
23 your career?

24 A. Practices I could do first, if you wouldn't mind.

25 When I came back to England, I set up our own

Rothman - direct

1 angioplasty service. We didn't have one. So I set up a  
2 service in 1982. And we grew very slowly. But I sort of  
3 grew to practice the art of angioplasty.

4 And in 1986 I helped found our Professional  
5 Society of Interventional Cardiologists in the United  
6 Kingdom. That has gone on to become a role model all over  
7 Europe. It is a professional body that, if you like, takes  
8 an interest in angioplasty from a patient perspective and a  
9 doctor perspective.

10 So from professional practice, I have done that.  
11 And I have also been involved in lots of other first-in-man  
12 technologies that we can talk about if you would like.

13 Q. Perhaps you could give one example of those.

14 A. Yes. The original role of angioplasty was to take a  
15 balloon and put it into the artery and stretch the artery to  
16 relieve the narrowing.

17 Unfortunately, that had a rather unpredictable  
18 outcome. If you were fortunate, the artery would open and  
19 stay open, and then I could go home and sleep at nights,  
20 possibly, if it stayed open. But frequently, you couldn't,  
21 because these arteries used to collapse, rather  
22 unpredictably, after we had done the procedure, and it was a  
23 rather unpredictable period for the first 24 to 36 hours  
24 after the procedure.

25 Then in 1987, I had the good fortune to become

Rothman - direct

1 one of the first people in the U.K., in Europe, to put in  
2 coronary stents. And a chap called Richard Schatz, who is  
3 the partner of Julio Palmaz -- and we have seen the Palmaz  
4 stent before that, the big elephant-like stent -- Richard  
5 Schatz came to my institution and taught me how to put in  
6 stents in 1987.

7 We put them in then to try and what we call bail  
8 out, hold open or sure open the artery to stop it from  
9 collapsing, a bit like in a mine shaft you sure it open.

10 My wife at the time said she was rather grateful  
11 for this because actually it was the first time I started to  
12 sleep at night, rather than when I was in the practice of  
13 angioplasty, because you could reliably depend on the  
14 patient to keep the artery open.

15 Q. Do you hold any current posts in the hospitals at the  
16 U.K. or elsewhere?

17 A. Yes. I am a consultant cardiologist. That is our  
18 term for a staff cardiologist. In the United Kingdom I have  
19 held the post as a staff cardiologist since 1982. I still  
20 hold that post.

21 I was awarded the title of Professor of  
22 Cardiology, Professor of Interventional Cardiology, about  
23 ten years ago.

24 Q. Have you conducted any research in the field of  
25 biomedical devices?

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1 A. Yes, quite a lot. I mean, apart from doing my  
2 clinical work in looking after patients and doing  
3 angioplasties, et cetera, and teaching and training, I have  
4 always had an interest in research. So I have continued  
5 quite a strong research program. For example -- and I have  
6 been involved in the introduction of drugs for heart  
7 disease, particularly related to the practice of stenting,  
8 and angioplasty.

9 I have also been involved in quite a lot of the  
10 trials of stents, because you have to prove things work.  
11 You can't just say, oh, that's a good idea. It looks like  
12 it works.

13 You have to prove it to the community, that it's  
14 better than some of the other stents.

15 So I have participated in a lot of stent  
16 research. I have also led those as a principal  
17 investigator, in other words, the person who sets it up,  
18 maybe runs it. I just recently completed a study of 8,000  
19 patients worldwide on a stent, looking at the effects of  
20 that stent versus other technologies.

21 I have also created new devices, tested devices  
22 and created my own new devices or tested other people's new  
23 devices.

24 Q. Do you have any patents?

25 A. Yes, I have a few. I have somewhere around 50



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1 patents.

2 Q. Can you just give us some ideas about what those  
3 patents relate to?

4 A. My first sort of series of patents, family of patents,  
5 was related to a problem that I saw while doing  
6 angioplasty -- didn't see, actually. The problem was when  
7 you do angioplasty, you look at the pictures on an x-ray  
8 screen, the patient is lying on the table, we manipulate  
9 things inside the patient, and we look at a screen that  
10 shows a picture based on the x-rays going through the  
11 patient.

12 Those screens and that x-ray technology doesn't  
13 give you very fine detail.

14 Today, better. But in 1980s, not very good.

15 So I was working with wires going down arteries,  
16 little tears occurring in arteries, in the walls, that  
17 eventually might suddenly close off the artery. You  
18 couldn't see them.

19 So I was with a friend, in a pub, and on the  
20 back of an envelope he drew an idea to create a tool to look  
21 inside arteries.

22 Now, you can't look with the ordinary eye,  
23 because the blood is red and you can't see through it. So  
24 we used the principle that bats use, ultrasound,  
25 high-frequency ultrasound.

Rothman - direct

1                   And you can use ultrasound to go through blood  
2                   and see a picture.

3                   So we spent the next years developing an imaging  
4                   technology to look inside human coronary arteries. And we  
5                   evolved that and developed it. And eventually that company  
6                   got sold. We created a company out of it. We sold that, on  
7                   what is now a technology that is used worldwide. I don't  
8                   have any interest in that, unfortunately, anymore. But we  
9                   sold that technology, and it's now used.

10                  That is one technology, for example.

11                  Q.       Okay. Dr. Rothman, do you have any personal  
12                  experience implanting artificial heart valves?

13                  A.       There is a two-part answer to that, if I may.

14                         The conventional way, until recently, was to do  
15                         open chest, as you have heard over and over again. I love  
16                         the American expression, "cracking the chest." It is not a  
17                         term I would use. Not many patients like that concept.

18                         But the conventional way of doing it is, as you  
19                         know, is to saw through the sternum, the bone here, open the  
20                         chest and put a valve in. I don't do that. That's a  
21                         surgeon's job.

22                         It is a great procedure. I don't do that.

23                         I do the angioplasty or the catheter-based  
24                         technique in which you go up hopefully through a groin hole,  
25                         a hole in the groin, through an artery or through the chest

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1 wall. And I do those procedures to replace valves now.

2 Q. Have you used any of the devices that are made by  
3 either CoreValve or Edwards?

4 A. Yes, I have. Surprisingly, I actually used the  
5 Edwards device, the Edwards SAPIEN device, and have used  
6 that since the end of 1998.

7 Q. And why is it that you used the Edwards SAPIEN device?

8 A. Well, the normal concept of running a heart valve  
9 program is to have a team, requires a team. You have heard,  
10 it requires a cardiac surgeon, a cardiologist, something I  
11 called an anesthetist, you call an anesthesiologist, and all  
12 of those people.

13 And when I wanted to approach my team, the  
14 cardiac surgeons are very influential, I wanted to get their  
15 buy-in to the process. So we sort of said, okay, let's have  
16 a conversation about what technology we should use.

17 And the answer from them was, well, we know  
18 Edwards extremely well. We use their technology. We know  
19 it's reliable from a surgical point of view. And we don't  
20 know anything about the longevity, how long the CoreValve  
21 technology will last, it's a small company.

22 So they felt much more secure at that time about  
23 using the Edwards technology. And I stood away from that  
24 decision. I wanted everybody comfortable. And I was  
25 willing to go along with the group decision, which is what

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1 we did.

2 Q. Do you have any experience observing the use of a  
3 CoreValve device?

4 A. Oh, yes. I have seen the CoreValve device in use  
5 either by being in the angiographic laboratory or catheter  
6 laboratory, as you call it. I have also watched it on live  
7 case meetings, where you sit in a room like this and we  
8 watch on the screen a procedure being done. I have actually  
9 chaired sessions in those conferences, chairing sessions  
10 while a procedure is being done live, talking to the  
11 operator, asking him questions, explaining to the audience  
12 what is going on.

13 So I have quite a lot of experience with the  
14 CoreValve. I have no hands-on experience. But in about a  
15 month's time I am about to learn how to do CoreValve, and in  
16 fact next week I am going over to London to do two more  
17 Edwards valves. So we will do both.

18 Q. Now, you do not live in the U.K. anymore, or right  
19 now?

20 A. No, I don't live in the U.K. now. I moved to  
21 California about five weeks ago, four or five weeks.

22 Q. Why did you do that?

23 A. I became -- I took up a post of vice president of  
24 medical affairs for Medtronic in Santa Rosa, in the division  
25 of coronary and peripheral -- coronary and peripheral

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1 division.

2 Q. When did you accept your position with Medtronic?

3 A. Probably November of last year, 2009.

4 Q. When were you retained by CoreValve to examine the  
5 issues in this case?

6 A. I originally was asked to look at the Andersen patent,  
7 family of patents, about two and a half years ago, and  
8 consider the patent amongst many others, and wrote reports  
9 at that time. And that was a long time before. I convinced  
10 myself in reports to what I thought. I haven't changed my  
11 views since then. I have sort of given a view a long time  
12 ago, way, way before I even thought of joining Medtronic, and  
13 I didn't think of that, really, until last year.

14 Q. Does your work at Medtronic have any relation to the  
15 CoreValve device?

16 A. Not at all. CoreValve is held and managed in the  
17 structural heart disease division. And that is the division  
18 that deals with heart surgery. That's based in Minneapolis.  
19 And my position deals with coronary stents, balloons and  
20 devices relating to coronary treatment. We have no  
21 relationship -- we have a relationship with the people, but  
22 I have no responsibilities in that area.

23 Q. All right. Dr. Rothman, I would like to turn to your  
24 opinions. If you could perhaps just give a quick summary  
25 of the opinions that you have reached in this case?

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1 A. Well, I was asked to consider two issues. The first  
2 was, does the Generation 3 CoreValve device infringe the  
3 Andersen '552 patent, Claim 1? And I was also asked to give  
4 an opinion on the validity of the patent in relation to  
5 whether it is enabled. That means, does it enable a person  
6 of ordinary skill in the art, that is somebody like me, to  
7 be able to make and use the scope of the patent, the terms  
8 of the patent, without undue experimentation?

9 That is the full definition of what I was asked  
10 to do. That means does this device -- is it enabled?

11 Q. And before we move on, let me ask you, did you ask  
12 that some presentation slides be prepared to discuss your  
13 testimony?

14 A. Yes, I have. I have got -- yes, I have got a whole  
15 series of slides.

16 Q. Very good. Before we go into the details of your  
17 opinion, if we can take your opinion on noninfringement.  
18 Can I ask you to summarize what your opinion is on  
19 noninfringement?

20 A. Yes. The Generation 3 device to my mind does not  
21 infringe the '552 patent, Claim 1.

22 Q. And before you go on, can we see Slide 2, please.

23 A. Thank you. So this is a slide that I have made, which  
24 you have seen before, is Figure 1 of the Andersen patent  
25 here. And then the words from the claim itself. This is

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1 the claim, the claim starts down here and is up here. I  
2 forget what page that is on. But it is in the '552 patent.

3 I didn't say, also -- I should say that I don't  
4 believe that the '552 is enabled, either.

5 Q. Okay. Thank you.

6 So on infringement, can you explain to the jury,  
7 just in summary terms, what your infringement opinion is?

8 A. Right. In considering infringement, I have to look at  
9 the claim and what are called claim elements. We have  
10 highlighted these in different colors, the ones that I am  
11 going to consider are the key ones, to differentiate  
12 between -- that are important in this patent.

13 So the first is, a plurality of commissural  
14 supports projecting from one side of. What are they? These  
15 are these elements here. From the side of the cylindrical  
16 support means, this set of zig-zags is a cylindrical support  
17 means, and these plurality of commissural supports are  
18 conditioned by the next bit, which says in a direction  
19 generally parallel to the longitudinal axis thereof.

20 The Court has told us that thereof means from  
21 the side of this cylinder.

22 So this has to project in the direction parallel  
23 to the long axis, and the long axis goes through here.

24 And those are the elements I considered to make  
25 a decision on infringement.

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1 Q. Okay. And, then, if you could give a similar summary  
2 of your opinion about enablement, please?

3 A. I have another slide of it.

4 I think I have a bullet slide on the next one I  
5 can summarize.

6 Q. Yes. I am not sure if we do have that.

7 A. Well, in simple terms, first of all, the device that  
8 we are told about is too large to go in a patient. The  
9 device that we have discussed in the preferred embodiment,  
10 that's the detailed description we have in the patent, is  
11 13.5 millimeters. And you have heard evidence that the  
12 probably largest comfortable size of perhaps the men here is  
13 eight millimeters, and the ladies might be a little smaller  
14 in femoral artery size.

15 That is the internal dimension this thing has to  
16 go through.

17 So the device is too large to go in a human  
18 being.

19 I believe the device is not strong enough. When  
20 it gets there an aortic stenosis, this narrow valve has to  
21 be held apart and kept apart. I don't believe the device is  
22 strong enough to do that.

23 And I think the arms, these arms that are  
24 parallel to the long axis, I believe what they are allowed  
25 to flex, in the design of the flex, I think that flexion



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1 will eventually lead to one of these towers collapsing.

2 So I don't think the device is enabled.

3 Q. All right. And can you tell the jury the material  
4 that you reviewed in order to reach your opinions?

5 A. A lot of material. First of all, I read obviously the  
6 Andersen patent, the '552. I spent a lot of time looking  
7 and re-reading that. I read that many times.

8 I also read the Court's construction of the  
9 claims which helps us define the claim language. And that  
10 actually becomes the rules by which we look at the words.

11 I also looked at diagrams of the CoreValve  
12 product, specifications of the CoreValve product.

13 I looked at depositions of other patents and I  
14 will use my own experience.

15 Q. And I believe you have up there a model of a CoreValve  
16 device. Do you see? We've got the big one, but do you also  
17 have -- no, I apologize.

18 MR. FERRALL: May I, Your Honor?

19 THE COURT: Yes.

20 MR. FERRALL: Thank you. (Passing up  
21 demonstrative.)

22 THE WITNESS: Thank you.

23 BY MR. FERRALL:

24 Q. Dr. Rothman, have you actually looked at CoreValve  
25 devices?

Rothman - direct

1 A. Of course.

2 Q. And what I have handed you there is an exhibit which  
3 we would like to actually -- it was a demonstrative.

4 MR. FERRALL: We would like to offer it into  
5 evidence. I believe it's Exhibit 1480.

6 BY MR. FERRALL:

7 Q. And do you recognize that?

8 A. I recognize the frame of the CoreValve. This is the  
9 frame that is in Gen 2 and in Gen 3. And there is a  
10 representation. It is made of possibly nylon fabric and  
11 attached to the valve.

12 THE COURT: Did I hear that you want to offer  
13 that into evidence?

14 MR. FERRALL: I would like to, Your Honor.

15 MR. NATHAN: No objection, Your Honor.

16 THE COURT: Admitted. But did you give it a  
17 number.

18 MR. FERRALL: Yes. 1480. Defendant's 1480.

19 (Defendant's Exhibit 1480 admitted into evidence.)

20 THE WITNESS: That means you get this.

21 BY MR. FERRALL:

22 Q. Dr. Rothman, you mentioned earlier a term, "the person  
23 of ordinary skill in the art."

24 A. I did.

25 Q. And can you explain to the jury what your

Rothman - direct

1 understanding is of the person of ordinary skill in the art  
2 for purposes of the '552 patent?

3 A. Yes. The opinion that is rendered, has to be rendered  
4 from a position of a somebody called a person of ordinary  
5 skill in the art, and that is a piece of legal terminology.  
6 And I represent that person of somebody who, in 1990, at the  
7 time of the patent, would have had the skill as an  
8 interventional cardiologist at the time, the knowledge of an  
9 interventional cardiologist. And it should not be somebody  
10 who is a world expert or leader. It has to be somebody of  
11 ordinary skill in the art. And that means I represent here  
12 the views of the majority of cardiologists who would do  
13 ballooning and stenting at that time. And that's the  
14 position I take in explaining to you what I believe.

15 Q. Okay. And can you explain to us, going back to 1990,  
16 what some of the problems a person of ordinary skill in the  
17 art would have faced in trying to develop an artificial  
18 heart valve for delivery via catheter?

19 A. Well, the first thing you would have faced would have  
20 been immense skepticism from everybody around him. If you  
21 talked to a cardiac surgeon in 1990, and even into 2000, the  
22 concept of putting a stent, any form of stent into a patient  
23 via a catheter was a ridiculous idea.

24 The surgeon would take a view that the valve is  
25 extremely strong. It's made up of this very heavily

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1     calcified, almost like concrete material. And the surgeon  
2     has a lot of difficulty, when he has to cut that out, where  
3     bits fall off, and they would be worried about some of this  
4     stuff going off to the brain or somewhere in a procedure in  
5     which you both stretch and replace the valve. So the first  
6     thing would have been skepticism.

7             The second thing you are going to do if you have  
8     to do it by catheterization is you have to get it into a  
9     patient. And the patent requires, by catheterization by  
10    known means. And "by known means," at that time, there were  
11    really only two approaches to the heart from the outside  
12    world, legal approaches. And that would have been through a  
13    hole in the groin under local anesthetic, putting a needle  
14    into the artery and then gaining access in that way or  
15    perhaps taking the artery here, the one the doctors do when  
16    they measure of your blood pressure, and cutting a little  
17    nick in the skin, maybe two millimeters, and getting access  
18    to this artery.

19            Now, this artery is probably only about  
20    three millimeters at most in internal diameter and the one  
21    in the leg is around eight millimeters. It can be smaller  
22    with someone who is diseased and particularly in the  
23    elderly. So we have to get into an eight millimeter artery,  
24    let's say. That is a tough requirement.

25            Then we have to get it all the way up and into

Rothman - direct

1 the valve position. You have to deliver it in some way, and  
2 you have to deliver it and not obstruct the flow of blood  
3 that is coming out of the heart, because you are conscious  
4 and awake or preferably conscious and awake during the  
5 procedure. So you have to do this thing quickly because if  
6 you obstruct blood for more than seven to ten seconds, the  
7 blood pressure starts to drop, the patient starts to lose  
8 consciousness; another 10 or 15 seconds, they start to fit.  
9 And you need to ventilate them or do something or take the  
10 whole thing out good. So you have to be pretty quick. So  
11 you need to get this thing in quickly.

12 You have to anchor it. You don't get a second  
13 chance. You have to anchor it. You have to anchor it in  
14 the right place. And, unfortunately, this is a very  
15 dangerous area. It's a mine field because not only do you  
16 have to push the valve out of the way just above -- if I can  
17 just point to this what you have seen before.

18 Excuse me. Can you see that?

19 (Jurors nod yes.)

20 THE WITNESS: Thank you.

21 Just above the valve here. Only five to eight  
22 millimeters above are the essential orifices or holes to  
23 that provide life to all of us. And you mustn't obstruct  
24 those holes under any circumstances.

25 So there is a series of challenges.

Rothman - direct

1 MR. FERRALL: Okay. And if we could see Slide  
2 No. 4, please.

3 BY MR. FERRALL:

4 Q. And tell us what you prepared for this slide.

5 A. So this slide sort of summarizes what I just  
6 extemporized.

7 It has to be compressible enough to get there.

8 It has to be is small enough to get into the  
9 vessel.

10 You have to align it when you get it there.  
11 It's no good at being slightly off axis because if it's off  
12 axis, it has a tendency to move, and also off axis could  
13 lead to damage to the valve. I could explain that a bit  
14 more later, if you would like.

15 It has to stay in place, in a one shot, almost  
16 one shot delivery process.

17 I mentioned it mustn't block the coronary  
18 arteries.

19 And it has got to be strong enough to push open  
20 these very diseased valves. And I do, I do a technique  
21 called balloon valvuloplasty in which the valve is very  
22 narrowed and you balloon open this valve. And you can see  
23 the indent that these valve leaflets cause on the balloon  
24 until they suddenly give and they now start to open. So  
25 they are very strong when they're heavily diseased.

Rothman - direct

1 Q. Dr. Rothman, did you prepare an animation to  
2 illustrate some of these issues?

3 A. I have.

4 Q. Okay. If we could see the animation at 5.

5 A. This is showing the pulsatility of the heart movement.  
6 It's a very dynamic area, and this is my visualization of  
7 what would happen if the frame is not strong enough to keep  
8 this in place. As we heard yesterday, there are two forces  
9 going on. A number of forces.

10 There is the compression of the ventricle, which  
11 is really strong. There is a rocking motion that is going  
12 on in the heart. The heart rocks up and down.

13 And there is also a backward percussive force,  
14 which I think Mr. Michiels called -- another word I never  
15 heard before -- a back slam against the valve.

16 So if you could just run that again.

17 Q. Actually, before we run it, Dr. Rothman, the device  
18 that is in there is -- can you tell us, is that a real  
19 device?

20 A. No, no. It's just any device. I mean I'm not trying  
21 to represent any device here, particularly. It's just a  
22 device placed there. It's one I constructed earlier.

23 Q. Okay.

24 A. So we have, it's placed here. Let's say we balloon  
25 deployed it. It's in place. Perhaps it's not anchored

Rothman - direct

1 properly. It's not pressed into the wall far enough.

2 And then if you wouldn't mind running that.

3 You can see the heart is moving, the force.

4 There is a back push on the valve, back push. And we just  
5 get the ventricular dislodgement, potentially.

6 And I actually have had this happen whilst I was  
7 doing a procedure.

8 Q. And what are the consequences?

9 A. It scares the life out of you as an operator, I can  
10 tell you. It's frightening.

11 And, also, if you balloon open the valve at the  
12 time and the valve is now leaking and you are about to  
13 deliver a stent into it, and you don't get it in perfectly,  
14 and it comes out you have a leaky valve in place, you got to  
15 put another one in a hurry, plus you also have to deal with  
16 wherever that has gone and make it not obstruct blood flow.  
17 So that is quite a challenge.

18 It happens rarely, thank goodness, in my  
19 experience and in the literature but it does happen.

20 Q. Okay. And what I would like to do now -- thank you,  
21 Mr. Hugo -- is talk about the CoreValve device. Have you  
22 analyzed whether the CoreValve device solved some or all of  
23 the problems that you have identified?

24 A. Yes.

25 Q. Okay. And can you explain perhaps with the magnet



Rothman - direct

1 board?

2 A. Could I put my problem slide back up?

3 Q. Sure. That is Slide No. 4.

4 A. So this is -- sorry. Can you hear this?

5 THE COURT: It's okay. It's important they hear  
6 you.

7 THE WITNESS: I had my back to you. Sorry.

8 THE COURT: That's all right.

9 THE WITNESS: This is a representation of the  
10 CoreValve, Generation 2, Generation 3. And the points that  
11 we talked about before is this is compressible by nature of  
12 several things. One is by the design of it, which we'll go  
13 into in a bit more detail. But it's made of a nitinol  
14 material and it's delivered without a balloon inside it. In  
15 the other design of Andersen, you require a balloon to  
16 expand it, although that is not a limitation because you are  
17 allowed in the Andersen patent to do it. But, particularly,  
18 this is designed to be very compressible.

19 But it's also designed to have a lot of power  
20 down here to help it sit and hold the valve open. But the  
21 design is also --

22 THE COURT: So, Mr. Ferrall, you might have the  
23 witness, when he says here or there --

24 THE WITNESS: I'm sorry.

25 THE COURT: -- identify.

Rothman - direct

1 THE WITNESS: I'm sorry, Your Honor.

2 MR. FERRALL: Yes. If you could, Dr. Rothman,  
3 perhaps describe where you are pointing.

4 THE WITNESS: Yes. I'll start again.

5 MR. FERRALL: No. You can just continue.

6 THE WITNESS: So the bottom of the device is a  
7 very strong section of the valve designed in part to hold  
8 the native or diseased valve open. That's at the bottom.

9 It's also shaped like a cone. And if I can just  
10 point to this, if I may.

11 You can see the cone shape here. And that is  
12 designed to, when you put it in, you release the bottom  
13 part, and you pull it up so it seats nicely in the bottom  
14 here.

15 And the idea of that is to stop it migrating,  
16 cone shape. It is much more difficult to migrate because  
17 it's locked in place.

18 And also that cone shape actually makes the flow  
19 of blood more directed over the valve. The orientation  
20 question I mentioned about alignment.

21 The top end of this device, this wide top of the  
22 device, another cone or cone shape, actually helps orientate  
23 the bottom. So as you release this and then release this,  
24 if you are slightly off axis, it aligns it. So it's  
25 designed to center.

Rothman - direct

1           Another thing about alignment in the top end is  
2           you get anchoring in two places rather than anchoring in one  
3           place. So those are important elements there.

4           It's also designed not to block the coronary  
5           arteries. I set that a little low there, perhaps. But it's  
6           designed by this conical shape here. Pulls in, pulls away  
7           from the coronary arteries, and that is by design. And that  
8           is strong enough to support the valve.

9           So I think that sort of explains how the  
10          CoreValve is designed to overcome these issues.

11         Q.     Thank you, Dr. Rothman. If you could return to your  
12         seat.

13         A.     (Witness complies.)

14         Q.     And let's turn to the Andersen patent. You have  
15         studied the patent, I take it?

16         A.     Yes.

17         Q.     And you have studied the Court's claim construction?

18         A.     I have.

19         Q.     And you're following the claim construction in your  
20         testimony?

21         A.     You have to. Yes.

22         Q.     And let's actually keep that Slide 6 up.

23                 Because I'd like you, again, with respect to  
24         these problems that you identified, tell us how you  
25         understand the '552 patent attempts to solve them.

Rothman - direct

1 A. Yes, I have a little ...

2 Q. Yes. If you could, Dr. Rothman.

3 And for the record, that is a magnet that is  
4 roughly in the form of the Andersen '552 prototype.

5 A. It seems to have had a little damage. Anyway, don't  
6 worry about that. That is meant to represent wear and tear.

7 The Andersen patent calls for compression of the  
8 device to deliver it. I already mentioned that they didn't  
9 tell us how to make it small enough to go into a femoral  
10 artery.

11 The idea of seating it here is to balloon expand  
12 it, and the patent tells us balloon expand it to greater  
13 than the size of the channel that it sits in.

14 So its anchoring method is not like the  
15 CoreValve, which is a cone that seats here. It's actually a  
16 cylinder which is expanded to compress itself into the wall.

17 And, of course, a cylinder can move or can tilt.  
18 So that is the solution that they offer for anchoring is to  
19 do that. There is no upper anchoring point. There is just  
20 this one anchor point.

21 The idea is to put this in the right place, not  
22 too high, and in that way avoid the coronary artery orifice  
23 or beginning. And we can talk a little bit later whether  
24 they achieve it, but the idea is to keep it out of the way  
25 of the coronary arteries.

Rothman - direct

1           The next part is, it is supposed to push the  
2           damage or diseased valve that sits there, can't be moved,  
3           sits there, out of the way. It does that by pushing or  
4           expansion outward of the Andersen device.

5           And, actually, the patent doesn't tell you what  
6           to do with this damaged valve. It's silent on how you  
7           manage those valves -- those leaflets that are there. But  
8           the concept is you would manage, you attempt to push them  
9           out of the way with this device.

10          Q.       And how was the valve supported in the Andersen  
11          design?

12          A.       In the Andersen design, the valve is supported on  
13          these. The commissural points are supported on these  
14          projections which are parallel to the long axis of the  
15          device.

16                 So they're supported on these three loops of  
17          metal. That's how the valve is supported.

18          Q.       Okay.

19                 THE COURT: Doctor, why don't you resume the  
20          stand.

21                 THE WITNESS: Thank you. (Witness complies.)

22          BY MR. FERRALL:

23          Q.       Dr. Rothman, if we could turn to your first claim  
24          limitation we're going to discuss regarding infringement.

25                 And if we could see Slide 8, please.

Rothman - direct

1 Can you tell us what your opinion is with  
2 respect to the claim element, a plurality of commissural  
3 supports projecting from one side of the support means.

4 A. Well, the requirement for literal infringement is that  
5 we have to have a plurality, a number of, commissural  
6 supports projecting from one side.

7 So here is these projecting. And I guess -- and  
8 the claim construction is here. This is what we are guided  
9 to use, to actually understand what this means. And it says  
10 virtually the same thing.

11 And it talks about projections. My simple  
12 understanding, as a person in 1990 and today, is a  
13 projection is something that projects just like if you look  
14 at the two pegs here on the bottom of this board -- holding  
15 this up -- they project. That is projection. So it  
16 projects.

17 Is the claim element met? No, because of what  
18 comes next.

19 Q. Well, and why don't you tell us that.

20 A. Well, it says here, plurality of commissural supports  
21 projecting from one side of the cylindrical support means in  
22 a direction generally parallel.

23 Well, that is not parallel. These pegs at the  
24 bottom of the board are not parallel. To be parallel, they  
25 have to point that way. The pegs on the board are at right

Rothman - direct

1 angle. So those pegs don't meet the claim.

2 Q. Dr. Rothman, before we talk about "generally  
3 parallel," do you have an opinion whether the CoreValve  
4 device has any commissural supports projecting from one side  
5 of this cylindrical support means?

6 A. Could I point to that?

7 Q. Yes. Use the magnet board, if you can.

8 A. So by looking at the CoreValve device here and the  
9 commissural supports, they are in the device, but they are  
10 supported not on pillars like here but are supported on the  
11 cells. And the actual mechanic mechanism of supporting the  
12 valve is squared over the whole integrated unit rather than  
13 just here. We heard already, but the support comes from  
14 this cell and this cell and this cell and this. I'm sorry.  
15 The adjacent cells around and elsewhere on the device.

16 So the load is shared across the whole device as  
17 opposed to the load just being shared on a point that we  
18 know can weaken and collapse.

19 Q. Now, you have been attending the trial this past six  
20 or seven days?

21 A. Unfortunately, yes.

22 Q. And you witnessed Dr. Buller's testimony. Correct ?

23 A. I did.

24 Q. If we could pull up Plaintiffs' Exhibit 2136, please?

25 I am sorry. I must have the wrong number.

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1                   It's 2137.

2                   Dr. Rothman, were you here when this exhibit was  
3                   created by Dr. Buller?

4           A.       I was.

5           Q.       And do you understand his contention about what  
6                   constitutes a commissural support projecting from one side?  
7                   Do you understand what --

8           A.       I heard his description of that. I can't see a  
9                   commissural support projecting. I think that's a fanciful  
10                  description.

11          Q.       Do you agree or disagree with his outlining in green  
12                   portions of the CoreValve frame and labeling them a  
13                   commissural support?

14          A.       Well, this is a commissural support. But there is no  
15                   commissural support projecting from anything. I mean, it's  
16                   part of the integrated structure of the whole device. And  
17                   the Andersen, you can see the three posts. Here, you can't  
18                   see the posts at all. There are no posts as such.

19                   This is just a selection by Dr. Buller of  
20                   something to try and make it look like a post.

21          Q.       Are you familiar with the concept called the doctrine  
22                   of equivalents?

23          A.       I am, yes.

24          Q.       And have you rendered an opinion about whether the  
25                   CoreValve device may infringe under the doctrine of



Rothman - direct

1       equivalents even if it doesn't literally infringe?

2       A.       I understand the -- yes, the doctrine of equivalents,  
3       yes.

4       Q.       Can you explain what you do to determine whether the  
5       CoreValve device infringes under the doctrine of  
6       equivalents?

7       A.       Yes. You have to see -- we have discussed already  
8       literal, is there a post, is there not a post. Then there  
9       is a second way of analyzing the same question of  
10       infringement, which is to look at the device and say, well,  
11       does that function do the same thing in a different way to  
12       achieve the same result?

13               It's called a function, way, result analysis.

14       Q.       In your opinion, does the CoreValve device perform,  
15       function in substantially the same way as the claimed  
16       invention with respect to this term commissural supports  
17       projecting?

18       A.       No. It performs a function. You have to support the  
19       valve. So that's yes to the function.

20               But the way and the result are not the same.

21       Q.       Can you explain to the jury the difference, if any,  
22       that you observed between the CoreValve device and the  
23       claimed invention in the way and result?

24       A.       May I stand?

25       Q.       Please do. Thank you.

Rothman - direct

1 (Witness steps down from stand.)

2 A. So the function we are looking at is supporting the  
3 valve. The way in which the CoreValve does it is to  
4 actually have the points of attachment here. And they are  
5 fixed on the slope, the 30-degree slope, by intention and  
6 design, they are fixed on this slope.

7 And we heard yesterday, that's to share the load  
8 and spread it out. This is a circular device in this plane.  
9 And we share the load not only upwards that way and  
10 downwards, but also around the device. So it does it in a  
11 completely different way.

12 This creates -- there is a design element which  
13 says 30 degree, and that actually creates some other  
14 benefits, because it actually creates this narrow waist.  
15 You need a narrow waist to feed off to get the 30 degree.

16 And you also need this conical shape here to  
17 feed in to get from the bottom, to get the waist, the  
18 30-degree angle, before you go up to the other point of  
19 attachment.

20 So it's there by design to share the load and to  
21 stop fatigue and tearing of the valve.

22 If you didn't share the load, and you did it,  
23 attached the posts and you continually had this black-slam,  
24 you could get wear and tear. As you know, on a tent or a  
25 marquee, if you don't allow some slack in it or some design,

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1     you will get tearing and ripping.

2                 We have seen experience of that with an early  
3     valve, the Ianesque (phonetic) valve that we had put in  
4     patients, where they were fixed onto a point, no give, and  
5     the valve tore. So we had disastrous consequences from  
6     that.

7                 So this is a specific design to avoid that sort  
8     of situation.

9     Q.     So, Dr. Rothman, perhaps you could just summarize the  
10    differences between the CoreValve device and the claimed  
11    invention in terms of the results achieved by this claim  
12    term, the commissural supports projecting from one side of  
13    the device?

14    A.     Well, the result is that in this device, as we were  
15    shown, there is give in the top. There is movement by  
16    design. Here, there is no movement by design. So this is a  
17    fixed -- this is a moving device, and so the result is  
18    different.

19                The load is shared. This waist is created,  
20    which has a value, which I will explain in a minute. And  
21    the cylinder has a value because it stops migration.

22                It's a complicated analysis. But you get a lot  
23    of benefits by having that angulation on that waist.

24    Q.     Thank you, Dr. Rothman. You can return to the stand.

25                (Witness resumes stand.)

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1 Q. Do you consider these differences to be insubstantial  
2 or substantial?

3 A. Oh, no. They are substantial. Without doubt, they  
4 are substantial.

5 Q. Let's turn to the next limitation you were going to  
6 opine upon, which you have already talked about a little  
7 bit, I believe. That is the generally parallel.

8 If we could get up Slide 14.

9 A. Yes. I prepared this to indicate, again, we have the  
10 commissural supports projecting from, these are now colored  
11 in yellow. Here is the patent claim, called a claim  
12 limitation. And this is in a direction generally parallel  
13 to the longitudinal axis thereof.

14 Now we have the Court's claim construction here  
15 above and underneath.

16 And this, again, really doesn't -- please read  
17 that -- but it doesn't change the need to have it parallel  
18 to the long axis and coming from the side of the cylindrical  
19 support means.

20 Q. And again, you looked at the opinion of Dr. Buller on  
21 this?

22 A. I did.

23 Q. And did Dr. Buller identify, in your view, a  
24 commissural support that was projecting generally parallel  
25 to the longitudinal axis?

Rothman - direct

1 A. Can I just have his --

2 Q. Sure. That is 2137, Plaintiffs' 2137, please.

3 A. To remind you, if you need reminding, this is the --  
4 sorry. The commissural point projecting from, this is the  
5 post that looks like Andersen or is supposed to look like  
6 Andersen.

7 Conveniently, you are looking at it face-on.  
8 You can't tell, but it's actually coming towards you. So  
9 look at the side post. The side post comes up here and  
10 splays away. And the point of attachment is on this 30  
11 degree.

12 That is in no way, to my mind, parallel to the  
13 long axis. Dr. Buller and I agree on one thing, and that is  
14 the long axis, it is this line in red. That is the long  
15 axis. This to me is not parallel. 30 degrees is not  
16 parallel.

17 Q. Perhaps you can, if you want, Dr. Rothman, you have  
18 got the large CoreValve model you can show?

19 A. If we look at this, this is the 30-degree angle. To  
20 my mind, you can't get anywhere near parallel. It actually  
21 is almost a cone shape sitting upside-down here.

22 The definition of a cone is, you have sides that  
23 come to a point. And the cone here, you can see from above,  
24 is coming to a point down here. That's a cone. That's not  
25 parallel.

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1 Parallel means generally parallel (indicating).

2 Q. I want to go a step deeper on this issue. Do you  
3 remember Dr. Buller's testimony about where the commissural  
4 points are located on the CoreValve device?

5 A. I do.

6 Q. Can you explain with reference to the claim, if  
7 need -- actually, if we could get Slide No. 14 up again.  
8 There you go.

9 So the claim has in it this term "for supporting  
10 the commissural points of the collapsible valve."

11 Can you explain what the commissural points are  
12 according to the Court's construction?

13 A. Yes. The commissural point is the point at which the  
14 valve joins. I don't know whether we could pull that claim  
15 construction or not up on the screen. Can we?

16 Q. Thank you.

17 So the Court's construction of commissural  
18 points here is listed Item 3?

19 A. Yes, I wanted to, A, refresh my own memory, which is  
20 correct, but also for the jury to see what Judge Sleet has  
21 told us.

22 Commissural point is the points or locations  
23 where the leaflets of the valve are joined.

24 It sounds simple.

25 Q. Did you analyze the CoreValve actual device with the

Rothman - direct

1 valve in it to see where the commissural points are?

2 A. Yes. The one that we were looking at here is the  
3 model. So it doesn't actually show you the commissural  
4 points very long.

5 So what I did, at great expense to CoreValve, is  
6 to open a real one.

7 This is in water. What -- if I may show --

8 THE COURT: Any objection?

9 MR. NATHAN: No, Your Honor.

10 THE COURT: Yes, you may.

11 (Witness steps down from stand.)

12 THE WITNESS: If I can show you the point, if I  
13 put my finger in there, I will walk up and do it, the point  
14 of separation, you can see, is actually on the tab, that is  
15 the point of attachment at the top, this tab point that we  
16 have referred to. And it's halfway up that tab.

17 THE COURT: Doctor, you might want to move a  
18 little more to your right there so all the jurors can see  
19 it.

20 THE WITNESS: So the commissural point as I have  
21 separated is actually halfway up the tab. So it's on the  
22 slope of the 30-degree shoulder.

23 We may have to pass that around. Just put your  
24 finger in there. It won't hurt you.

25 (Witness resumes stand.)

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1 BY MR. FERRALL:

2 Q. Just to clarify, Dr. Rothman, that one is not going to  
3 be used in any patient. Right?

4 A. I am sorry. I am going to take it back to my  
5 third-world country, England, and use it.

6 (Laughter.)

7 That is a porcine, or pig, pericardium valve.

8 That is a real one.

9 Q. Can we get up Plaintiffs' Exhibit 2135?

10 Dr. Rothman, I would like to try to tie this  
11 together now with the claim language.

12 You recognize this as another exhibit created by  
13 Dr. Buller.

14 A. Yes. The reason I wanted to show where the  
15 commissural point is, the point of join, is because it does  
16 make a difference in how you appreciate the claim language  
17 and infringement.

18 So if I could just show you this.

19 This is a top view, top view, like you just  
20 looked at it, of the real valve. And Dr. Buller has marked  
21 the commissural point as down here. You see, that's on the  
22 ring of the -- it looks like it's virtually on a ring. And  
23 I have just shown you that actually it's not there. It's  
24 here. It's halfway up the tab.

25 The reason I point that out to you is, this is



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1 set on a 30-degree point. And Dr. Buller has conveniently  
2 put it, I think, further down, down the valve, so to put it  
3 on what could be on the perpendicular part or -- I have said  
4 all along this is a cone. But if we are going to argue  
5 about whether it is really a cone, if you put it on there,  
6 it's closer to the concept of infringing. And I don't  
7 believe this does infringe.

8 I wanted you to be very clear that the  
9 commissural point, the point of attachment of the leaflets,  
10 is most definitely, as you have just seen, on the 30-degree  
11 slope.

12 So it is not perpendicular -- sorry -- not  
13 parallel to the long axis.

14 Q. Dr. Rothman, did you evaluate whether there are  
15 substantial differences in the way and the result obtained  
16 in the CoreValve device as opposed to the claimed device  
17 with respect to the angle of attachment for the valve?

18 A. Yes. In looking at the doctrine of equivalents, I  
19 have been sort of unable to separate all the different bits  
20 out, because when you look at one bit, it has a number of  
21 consequences.

22 If I may stand up.

23 Thank you.

24 (Witness steps down from stand.)

25 In making the attachment at 30 degrees, you get

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1 this slope. In getting the slope, the slope comes into a  
2 point. And you have to end that slope somewhere. And you  
3 end it in the waist, as I said before.

4 And the waist has -- I would like to put this  
5 back here. The waist that's here, which is there by design  
6 in this unit, the waist pulls the device away from the  
7 coronary arteries. That is really an essential piece of it.

8 Also, in so doing, in having a waist, the cone  
9 at the bottom, which stops migration, holds the valve open  
10 because it's more powerful than the top part, holds the  
11 valve open, stops migration, actually channels the blood to  
12 flow over this valve.

13 And the ventricle, as I think Dr. Seguin, the  
14 surgeon, said, this ventricle down here is actually  
15 cone-shaped. And he designed this to fit into that cone  
16 smoothly, rather than like this (indicating), which disturbs  
17 the blood flow, he made it go like this (indicating), which  
18 follows the line of flow. That is important, because that  
19 forces the blood flow over the valve in a uniform way.

20 Why is that important?

21 If you actually had the flow hit the valve in a  
22 slightly off-axis way, you might cause turbulence, more on  
23 one valve than the other. And that might make it  
24 incompetent or it actually might make it slam together more  
25 and wear it. So you might actually get a leak.

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1 Another point about this is if we put the  
2 balloon-expandable device in here, it sets to the eventual  
3 size that it takes inside this catheter. So I might choose  
4 to put it in at 26 millimeters, let's say. But if the  
5 calcium in here of the valve doesn't let it go out, it might  
6 be 25.

7 If this is 25, but it's designed to be 26, it  
8 will bang together more.

9 If the tissue is a little bit relaxed in that  
10 state, and I dilate to what I think is 26 but it goes up to  
11 27, the valve will now not meet properly and I will get  
12 leak.

13 The conical device here, the idea of a fixed  
14 waist here means that whatever happens down there at the  
15 bottom doesn't change the fixed waist. This is always the  
16 right size, independent of what size you are.

17 And that's very important, because this won't  
18 leak, by intent, it won't leak, it won't get extra wear on  
19 it.

20 So the slope of the shoulders gives you the  
21 ability to specify the waist and independent of the strong  
22 bottom.

23 Q. Does the slope of the attachment have any effect on  
24 the movement of the device in the body?

25 A. Does it move as a consequence?

Rothman - direct

1 Q. Yes.

2 A. No, because it's such an integrated unit and the load  
3 on these tabs is shared across, there is no effective  
4 movement of this device inside the body.

5 I have seen this on angiograms and x-rays. This  
6 device does not move at all.

7 Sorry. The last part is to get the alignment,  
8 to ensure that the slope comes up properly, you have this  
9 top part, which also gives you the waist.

10 Q. Thank you. You can take your seat again.

11 (Witness resumes stand.)

12 Q. Again, do you consider the differences that you have  
13 just described between the CoreValve device and the claimed  
14 device to be insubstantial or substantial?

15 A. In no way are they insubstantial. They are very  
16 substantial differences.

17 Q. Now, you mentioned, you were just talking about  
18 movement. And you were here when some videos were shown of  
19 the CoreValve device yesterday?

20 A. Yes.

21 Q. Have you considered those videos in evaluating whether  
22 the CoreValve device, in fact, moves in physiological  
23 conditions?

24 A. Yes, I have.

25 Q. And what have you concluded from those videos?

Rothman - direct

1 A. Well, I think there were three shown yesterday.  
2 Should we consider each of them?

3 Q. Sure.

4 A. Let me just -- the first one that Mr. Michiels showed,  
5 where the device was fixed in a clamp with fluid running  
6 through it, I think we all saw that actually the whole  
7 device was moving. That was my impression as well. And I  
8 have looked at that in detail.

9 That one I am unconcerned about.

10 Q. Did that video shown by Mr. Michiels demonstrate  
11 anything about whether the frame deflects?

12 A. No, it did not. And there was a report that showed  
13 that it deflected less than .25 millimeters. That doesn't  
14 mean it deflected .249. It means it was less than and it  
15 could have been zero. We don't know. The sensitivity of  
16 the test is at the top point of .25.

17 So all we know from that test is that that  
18 device does not move any substantial amount. And we don't  
19 know because of the sensitivity of the device from that test  
20 whether it moves at all.

21 Q. Okay. And there was another video or image shown that  
22 was described as I believe an FEA. And are you familiar  
23 with those?

24 A. I am familiar with what they are. I don't perform  
25 them myself. I'm not it a computer technologist to do that

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1 sort of work. What that means, it is a finite element  
2 analysis. And what it is, it's a computer simulation, and  
3 like all computer simulations, you tell the computer what  
4 the parameters are that you want it to simulate.

5 So you say what blood pressure do I want it to  
6 be that I'm playing in this simulation? What size of  
7 channel am I putting it in? What size is the top of the  
8 channel? What size is the bottom of the channel? What is  
9 the blood pressure on the other side of the valve? All  
10 simulations. Not a real valve.

11 Q. So the images we saw weren't a picture of the valve?

12 A. Oh, no, they weren't the valve. And, moreover, if  
13 that FEA was the one I think it is, because Mr. Nathan  
14 didn't tell us what it was, but if it's the one I think it  
15 is, it is actually simulating a worst case scenario under a  
16 number of different headings and actually was simulating  
17 what would happen under a very worst case scenario. That is  
18 not real life in a simulation. Sorry. It's not simulating  
19 real life even in the simulation.

20 MR. FERRALL: The other video was -- maybe we  
21 can get up Plaintiffs' Demonstrative -- I think it's 56. If  
22 we can get the still up there. Actually, it must be 58.

23 BY MR. FERRALL:

24 Q. That's the FEA?

25 A. That is the FEA.

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1 Q. There we go. This was another video that was run?

2 A. This was another video that was run.

3 Q. And do you have any view as to whether this  
4 demonstration tells one how the CoreValve device would flex  
5 under physiological conditions?

6 A. Yes. Well, I have a report that goes with that, if we  
7 may refer to it.

8 Q. That is Defendant's Exhibit 1477.

9 And if we could turn to the page beginning or  
10 ending in 921, I believe.

11 A. I think it's Page 5 of the report. Can you go to the  
12 next page? Oh, I'm sorry. No, let's start -- let's start  
13 here. Yes.

14 Q. Yes. If you could just explain what this report tells  
15 you about the test?

16 A. As it says at the top, it's a nitinol -- which is the  
17 fabric of the frame -- fatigue test analysis.

18 And what we're trying to do in this fatigue test  
19 is, it's to look at when this device will fail and trying to  
20 find when it will fail. And it's a sort of standard  
21 evaluation. In some tests, you take it to extreme  
22 conditions and see if it works.

23 Q. So based upon your review of this description of the  
24 test, do you believe that that video is attempting to  
25 replicate physiological conditions?

Rothman - direct

1 A. No. If we turn to the table slightly further on --  
2 the next page, I think. Nope, not that page.

3 Q. The page ending 921, Mr. Hugo. Next one.

4 A. There it is. This bit at the top, if you could blow  
5 that up for me. My eyesight is not that good.

6 The conditions that are being set up here are an  
7 arterial blood pressure of 200 -- so that is about my blood  
8 pressure right now. That is not physiological -- and the  
9 diastolic of 110. And as you know, these are very high  
10 blood pressures and these would actually render a patient at  
11 risk of stroke or heart attack. So this is not a  
12 physiological condition.

13 The thing here is actually that is very  
14 interesting, this is called the Delta -- that is what that  
15 symbol means -- P across the closed valve.

16 Now, normally, when you eject blood, as we were  
17 told yesterday, your blood pressure, say, is at 140 over 80,  
18 the blood goes out at 140 and comes back and back slams at  
19 80. What is the pressure across the valve, the back  
20 pressure? It's 60. That is 140 minus 80: 60.

21 Here, even though the blood pressure difference  
22 is 90, the back pressure, the difference on the valve is  
23 160. How do they do that? They've added pressure  
24 downstream of the valve and slammed it back, even more  
25 pressure. So, first, it goes through the valve at high



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1 pressure, 200, and it slams back at 160.

2 So I think in Dr. Pinchuk's analysis yesterday,  
3 he said, you know, sort of the 30 to 40 millimeters of  
4 mercury was about a basketball dropping three feet. Well,  
5 this is four times that. This is a slam-down with a  
6 basketball. This is a destructive test on the valve.

7 And so this is a very, very significant test.  
8 And this is a test to test the destructive forces.

9 Is that a fair test to show the jury does it  
10 move? No.

11 Q. Thank you, Dr. Rothman.

12 We can pull that down, Mr. Hugo. Thank you.

13 Now, one more question still on this claim  
14 element about "generally parallel."

15 Did you review the prosecution history of the  
16 '552 patent, Dr. Rothman?

17 A. Yes, I did.

18 Q. In the prosecution history, what we mean is the back  
19 and forth with the Patent Office in order to obtain the  
20 patent. Right?

21 A. Yes. It's a communication between presumably the  
22 patent lawyers for the Andersen team and the Patent Office,  
23 back and forth, to try to get a patent.

24 Q. And did you see how, if at all, the claim limitations  
25 we're talking about today came about during the prosecution

Rothman - direct

1 of the '552 patent?

2 A. Yes. In the patent prosecution history, as it is  
3 called, the documentation between the inventor and the  
4 Patent Office, there is quite a bit of to-ing and fro-ing in  
5 between. And from my reading of the patent history, the  
6 patent was about to be rejected. In fact, on two occasions  
7 was near to rejection.

8 And in 1993 -- the patent was filed in 1990, but  
9 in 1993, some language was added to the Claim 1. And maybe  
10 we can put that up.

11 Q. Yes. If we can look at Plaintiffs' Exhibit 3, the  
12 page ending in 313.

13 And do you recognize this as the original  
14 proposed claim?

15 A. Yes. And we can see -- I'm sorry -- wherein the  
16 commissural points of the elastical collapsible valves are  
17 mounted on the cylinder surface of the elastical stent.

18 There is no mention of commissional supports  
19 projecting from, et cetera.

20 Q. Or "generally parallel" language?

21 A. Thank you. Or "generally parallel." So that is  
22 missing up until.

23 Q. And then if we could look at Page 427, at page ending  
24 in 427 of the same exhibit. And if we could blow up the top  
25 half of that, Mr. Hugo.

Rothman - direct

1 Can you explain what you found here in this  
2 document? Actually, why don't you first explain what this  
3 document is.

4 A. This is an amended submission to the Patent Office.  
5 And the underlined part is the new elements that have been  
6 added to the patent in 1993 to avoid rejection.

7 So these become part of the patent. These  
8 become part of the claim language. And you have to carry  
9 out all these or your invention must have these elements in  
10 it to be protected by this patent. So what has been added  
11 has -- right. Where are we?

12 Has a plurality of circumferentially expandable  
13 sections such that the cylindrical support means, et cetera.

14 A plurality -- I can say that word; right? A  
15 plurality of commissural supports projecting from one side  
16 of the cylindrical support means -- which was there  
17 before -- in a direction generally parallel to the  
18 longitudinal axis thereof.

19 That is added in 1993. The other bit is added  
20 as well, but I don't think we're worried about that.

21 Q. And based on these facts, Dr. Rothman, is it your  
22 opinion --

23 MR. NATHAN: Objection. Can I have a sidebar at  
24 this point?

25 THE COURT: What is the basis of the objection?

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1 MR. NATHAN: There is an opinion about this.

2 THE COURT: All right.

3 (The following took place at sidebar.)

4 THE COURT: There is an opinion about what?

5 MR. NATHAN: He is going down the Festo track.

6 This is exactly the basis of their Festo motion. I don't  
7 mind him saying that the language was added in 1993. That  
8 is accurate, but he is now going to ask opinions about the  
9 significance.

10 THE COURT: Well, Festo is a matter for the  
11 Court.

12 MR. NATHAN: Exactly.

13 THE COURT: So is that what you are doing?

14 MR. FERRALL: I don't have to ask the next  
15 question. We weren't sure whether it was going to be  
16 submitted to the jury.

17 THE COURT: Come on, counsel. That has been  
18 your position right along, it's a matter for the Court. You  
19 understand.

20 Listen, counsel. I want you to move the  
21 examination along. It's taking too long, okay?

22 MR. NATHAN: Thank you, Your Honor.

23 THE COURT: The objection is sustained.

24 MR. FERRALL: Thank you.

25 (Sidebar conference over.)

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1 BY MR. FERRALL:

2 Q. Dr. Rothman, let's turn to the last limitation that  
3 you're providing an opinion on. And that is the  
4 "cylindrical supports means."

5 If we can look at Slide 16, please.

6 And can you tell us what you followed from the  
7 Court's claim construction to render an opinion about this  
8 claim element?

9 A. Okay. Well, again, claim element of the '552 patent,  
10 Claim 1, is there is a cylindrical support means. And in  
11 the patent, itself, in the figures, this is the portion we  
12 have called the cylindrical support means.

13 And the construction here is, Judge Sleet's  
14 construction, "a portion of the stent supporting the valve  
15 that has a shape of or relating to a cylinder."

16 Q. And what is your opinion as to whether the CoreValve  
17 device meets that claim limitation?

18 A. To my mind, there is no cylinder in this device. On  
19 the bottom, as I have explained over and over again, is a  
20 cone shape, and the top is an hourglass or a second cone  
21 inverted into that. So I don't believe there is any cone  
22 shape in there.

23 Q. Okay. Have you considered whether the CoreValve  
24 shape, in its various parts, is related to a cylinder?

25 A. Yes. Well, to my mind, again, the related to, we're

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1 not taught related by how much. And I take the cylinder to  
2 have parallel sides or virtually parallel sides and that is  
3 my definition, general definition of a cylinder.

4 And the base of the CoreValve is not intended to  
5 be a cylinder, by mistake, misshapen. It's intended to be a  
6 cone.

7 Q. Can you explain briefly whether in your view there are  
8 any differences in the way or the result of the CoreValve  
9 device as a result of its shape as compared to the claim  
10 language?

11 A. Well, at the risk of being repetitious, if I may.

12 Q. Well, and you can hit your points very briefly,  
13 Dr. Rothman.

14 A. This is a cylinder. It's designed to be a cylinder.  
15 It has the risk of, it has to be overexpanded to anchor it  
16 in the annulus or valve area. And it has, as I showed  
17 before, the risk of moving, the risk of misalignment and,  
18 therefore, the risk of moving again or even wear and tear on  
19 here, and also has the risk of blocking the coronary  
20 arteries if placed incorrectly.

21 And the difference here is the conical shape is  
22 designed to seat up in the valve and sit in the bottom of  
23 the ventricle to lock in place. That cone, not cylinder, is  
24 designed to lead to a point and, in leading to the point,  
25 create this narrow waist. So the cone is thereby designed

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1 and it gives you the features I mentioned of protecting the  
2 coronary arteries, the tissues, the CoreValve, away from it.  
3 It gives you the blood flow over the valve that is uniform.  
4 So very different function, very different way, very  
5 different result, or substantially different result.

6 Q. Thank you. Now, Dr. Buller testified about an opinion  
7 he had about what was disclosed in the '552 patent.

8 If we could get up Plaintiffs' Demonstrative  
9 Exhibit 28. I think that will ...

10 That's not right. That's not the right drawing.  
11 Mr. Hugo, that's okay. You can put that down.

12 Do you recall Dr. Buller's testimony about what  
13 he contended was disclosed by a certain passage in the  
14 patent at Column 6?

15 Maybe we can pull that up, Mr. Hugo.

16 And if we could just highlight the last full  
17 paragraph there in Column 6.

18 A. Right. Sorry.

19 Q. So, Dr. Rothman, do you remember the testimony about  
20 this portion of the patent?

21 A. Yes, I do. And the particular portion I think we're  
22 talking about starts here, really. And we're considering  
23 where we place the valve in the patient. We're considering  
24 placing the valve in what is called in the outflow track,  
25 the same place we talked about before, below the coronaries.

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1 So that's the position we're talking about.

2 And if we're doing just a little bit above, by  
3 placing the cardiac valve prosthesis, the Andersen  
4 invention, as shown in Figure 8.

5 I don't know whether you can pop up Figure 8.  
6 Can you?

7 THE COURT: The question isn't so much if they  
8 can, it's if they need to.

9 THE WITNESS: It would be helpful.

10 THE COURT: Okay.

11 THE WITNESS: It would help me.

12 They're talking about putting this in this  
13 position. And this is the position of the native valve.  
14 And, remember, this is a figure from their patent. The  
15 Andersen patent. So we're trying to put it here below the  
16 origin of the coronary arteries as shown here in their  
17 diagram.

18 So I mentioned the risk of this thing. You've  
19 got to get it in the right place. You get a one time shot  
20 at it. If you cut the coronary arteries, you are in  
21 trouble.

22 So if we can go back to the actual document --  
23 patent. I'm sorry.

24 So by placing the cardiac valve prosthesis as  
25 shown in Figure 8 -- Figure 8 -- there is a risk of



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1 detachment -- this is coming from the patent. They're  
2 actually acknowledging there is a risk of detachment --  
3 and/or covering the mouth of the coronary arteries --  
4 here -- and therefore it is preferred to use a higher  
5 stent -- there is a problem with the word there. What does  
6 that mean? -- which, for instance, comprises several rings,  
7 7 and 8 -- those are additional rings like this -- placed on  
8 top of each other.

9 Let's not worry about the rings for a moment.  
10 This allows -- sorry. This allows a fixation of the  
11 prosthesis at a place after the mouth of the coronary  
12 arteries.

13 So if there is a risk of detachment and covering  
14 the coronary arteries, don't go there. Put this device  
15 after the mouth of the coronary arteries even though the  
16 valve itself is in the position between the coronary  
17 arteries and left ventricle.

18 So we've put the Andersen invention here. And I  
19 believe this paragraph is saying, by the way, your native  
20 valve, not prosthetic valve, is still sitting here by  
21 reference. Put this up here, don't go near the coronaries.  
22 And, by the way, the valve is here in the normal position.  
23 It's still there.

24 Q. Now, why don't we leave this up, Dr. Rothman.

25 I just want to focus the jury on what was said

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1 before.

2 If you could move the CoreValve magnet, please.

3 (Witness steps down from stand.)

4 Q. Thank you. You will recall, Dr. Buller drew in his  
5 interpretation. It had two points of fixation.

6 A. Yeah. I have a picture of it. Can we put that up, do  
7 you think? There is a picture of Dr. Buller's drawing.

8 Q. Do we have that?

9 A. It was Slide 29, I think, in Dr. Buller's set.

10 That's the one.

11 Q. Your memory is better than mine. Thank you.

12 (Witness resumes stand.)

13 Q. In your view, does that passage from the '552 patent  
14 disclose a device such as this?

15 A. Only if you wanted to create something that looked  
16 like a CoreValve. I don't think it says that at all. I  
17 think it says put the device here and the valve -- the  
18 native valve, my valve, that I am trying to treat, which is,  
19 of course, leaking, not narrowed, because this wouldn't  
20 treat a narrowed valve, if you place it up here, the native  
21 valve is still here.

22 Now, I don't think that in 1990 any  
23 interventional cardiologist in his right mind would have  
24 considered this sort of device. This covers the coronary  
25 arteries. And in 1990 we would have been terrified of

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1 covering the coronary arteries or going near them with  
2 metal, because in 1990 we were only really just at the very  
3 early stages of putting stents in coronary arteries, and we  
4 had lots of complications in the early days putting stents  
5 in coronary arteries.

6 We had them suddenly block, thrombose with your  
7 blood. In treating patients, to try to prevent the  
8 blocking, we made them bleed excessively because we gave  
9 them what in England is called rat poison, which makes your  
10 blood thinner.

11 THE COURT: Counsel, I don't mean to cut the  
12 Doctor off, but can you ask another question?

13 MR. FERRALL: Thank you.

14 BY MR. FERRALL:

15 Q. Doctor, in light of your view about the disclosure in  
16 the patent, does that Column 6 language affect your opinion  
17 whatsoever about the scope of equivalents available under  
18 Claim 1?

19 A. No. Claim 1 requires, as I have said over and over  
20 again, commissural supports projecting from. This has no  
21 projections, and I don't think this is covered by Claim 1.

22 Q. Thank you. We can take that down, Mr. Hugo.

23 Did you review the CoreValve patents?

24 A. Yes, I did.

25 Q. Did you have any view as to whether one or more claims

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1 of the CoreValve patents covered the CoreValve GEN 3 device?

2 A. Yes.

3 Q. And if we could pull up Defendant's Exhibit 1276,  
4 please?

5 Do you understand, this is one of the patents to  
6 Dr. Seguin?

7 A. This is the '682 patent up here.

8 If we, for example, go to Claim 17.

9 Q. Can we pull that up, Mr. Hugo?

10 Do you have an opinion as to whether this claim  
11 covers the CoreValve device?

12 A. I do. And I believe it does.

13 Q. Can you just briefly identify the elements that cover  
14 the CoreValve device?

15 A. Well, I think I need to read it all the way:

16 A radially expandable stent comprising at least  
17 one expandable zone that is configured in an expanded state,  
18 to bear against a wall of the native body lumen in a manner  
19 so as to resist migration, and means for mounting the valve  
20 on the stent such that, when expanded, the valve is  
21 positioned outside of the zone, which is the zone of the  
22 valve, wherein the stent comprises a middle portion having a  
23 smaller diameter than at end portions thereof; the valve  
24 having a shape corresponding to that zone of the stent in  
25 whose area it is intended to be mounted; and wherein the

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1 middle portion forms two inverted truncated cones.

2 Q. That middle portion, where is that on the CoreValve  
3 device?

4 A. That is here. And these are the two inverted cones.

5 Q. Are you familiar whether the Patent and Trademark  
6 Office was informed of the disclosure of the Andersen  
7 invention when this patent was applied for?

8 A. Yes. The Andersen inventions are mentioned as prior  
9 art.

10 Q. And if we could look at Defendant's Exhibit 140,  
11 please.

12 A. This is probably the patent.

13 This is patent '406. We need to look at Claim  
14 8. It's not just one claim. There are a number of claims.

15 Q. The claim -- Mr. Hugo, Claim 8 is a combination. If  
16 you can put up Claim 1 and Claim 8.

17 A. So this is what I showed was a dependent claim on  
18 Claim 1.

19 So, again, A valve having a plurality of  
20 resilient leaflets; a valve supporting comprising a central  
21 band, comprising a plurality of expandable cells, the valve  
22 support configured to be collapsible for transluminal  
23 delivery and expandable to contact the anatomical annulus of  
24 the native valve when the assembly is positioned in situ,  
25 said valve support supporting the base and the commissure

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1 points of the valve; and an anchor for engaging the lumen  
2 wall when expanded in place for preventing substantial  
3 migration of the valve assembly after deployment; wherein  
4 the anchor is itself configured to be expandable -- that  
5 talks about the bottom, that last bit.

6 Then in 8, which is a claim dependent on Claim  
7 1, The valve assembly of Claim 1, further comprising a  
8 second anchor.

9 The top part of the CoreValve.

10 So this claim, Claim 1 with Claim 8, has two  
11 anchors, and has a waist.

12 Q. Dr. Rothman, can you explain how the fact that  
13 CoreValve has some patents that in your opinion cover the  
14 CoreValve device, how that affects your opinion regarding  
15 the doctrine of equivalents?

16 A. The Patent Office knew about this.

17 I am sorry. I don't think I understand your  
18 question.

19 Q. Did the Patent Office know -- for this patent, also,  
20 did the Patent Office know about the '552 patent?

21 A. Yes, it did.

22 MR. NATHAN: It's leading.

23 THE COURT: Overruled.

24 BY MR. FERRALL:

25 Q. In light of the Patent Office's awareness of the

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1     Andersen patent, and their granting, their allowance of this  
2     claim, how does that affect your opinion about the doctrine  
3     of equivalents?

4     A.     The Patent Office knew about this and decided that  
5     this was an invention. It was novel. And it was novel over  
6     every other piece of art that they considered. So this is  
7     by definition an invention.

8     Q.     Thank you. Dr. Rothman, let's turn to your opinion on  
9     validity briefly.

10            You said you had an opinion about enablement.

11     A.     Yes.

12     Q.     We have heard a lot. So I am just going to go  
13     straight to the conclusion. Can you tell us why, in your  
14     opinion, the Andersen patents are not enabled? I believe we  
15     have a slide.

16     A.     Yes, I do have a slide.

17     Q.     If we can see Slide No. 20.

18     A.     In looking at enablement, I have chosen just a small  
19     number of reasons which I think are very important.

20            Enablement means, again, if I may, it has to be  
21     made or used, the patent, the scope of the patent has to be  
22     made or used by somebody like me, a person of ordinary skill  
23     in the art. I don't believe the device was small enough nor  
24     does the patent tell me how to make it small.

25            The second part of enablement is without undue

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1 experimentation. I think there is a huge amount of work --  
2 I don't know whether you could even do it even with work,  
3 but there is a huge amount of work in front of you to make  
4 it small enough.

5 You also have to make it strong enough. And  
6 that runs counter to making it small enough. You need  
7 strength. But if you make it so small you can get it in,  
8 you probably make it weak or flimsy. There is another  
9 challenge.

10 And it has to be safely and effectively placed  
11 in this one-time shot of delivery in there and it has to  
12 stay where you put it.

13 I think the Andersen patent fails to enable me  
14 to be able to do this in 1990 and perhaps even today.

15 Q. Did you review some of the events that occurred after  
16 the patent application, like the animal studies that the  
17 inventors performed?

18 A. Yes.

19 Q. Did those affect your opinion about enablement?

20 A. Yes. Well, in the patent itself, there is a section  
21 which talks about, make it out of .55-millimeter wire, et  
22 cetera. Then goes on to the fact, it strongly suggests that  
23 it has been used in animals but doesn't tell us the results.

24 In 1992 there is a paper eventually describing  
25 the results. And in the paper, there were eight pig



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1 experiments. And in three of them, the device was placed in  
2 the annulus where the valve was of a pig and moved  
3 immediately. And in three of them it occluded, blocked the  
4 coronary artery either partially or completely.

5 Subsequently, over the next year or so, there  
6 were a total of 42 pigs, and there was a 34-percent, one in  
7 three, success rate for partial or total success in placing  
8 the device. And actually, in the latter half of that 42  
9 pigs, they didn't even try to put it in the valve position.  
10 They put it in the descending aorta, on the arch of the  
11 aorta, but not in the valve. They stopped doing that. And  
12 one of the inventors actually gave evidence to say they  
13 stopped doing it because they couldn't do it.

14 So I think I have another slide to follow that.  
15 That just hits at the fact that they couldn't make it work.

16 Q. That was Slide 21.

17 A. Yes. So from their own studies, their 42 studies, we  
18 know it moved. They had situations where they landed it in  
19 the valve and it moved.

20 We heard Dr. Andersen, one of the inventors, on  
21 video say what is success? And his definition of success  
22 was five minutes. Well, five minutes is nothing. I can't  
23 put -- even start to think a device is successful based on  
24 five minutes experience.

25 Q. Dr. Rothman, to this day, are you aware of any device

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1 that has been approved for human use that is designed  
2 according to the claim limitations of Claim 1 with  
3 projecting commissural supports that are generally parallel,  
4 et cetera?

5 A. No.

6 Q. Thank you.

7 MR. FERRALL: Your Honor, may I approach?

8 THE COURT: Yes.

9 (The following took place at sidebar.)

10 THE COURT: Yes.

11 MR. FERRALL: I want to propose a proffer about  
12 evidence concerning the cylindrical rotation that would be  
13 pursuant to our proposed claim construction.

14 THE COURT: No, counsel.

15 MR. FERRALL: That is fine.

16 THE COURT: And I really, I want you to  
17 communicate this to your team, stop pushing the issue. You  
18 have preserved your position. Stop pushing it.

19 (End of sidebar conference.)

20 MR. FERRALL: Thank you, Dr. Rothman.

21 Your Honor, I have no further questions.

22 THE COURT: Ladies and gentlemen, Ms. Walker has  
23 reported to me that you have inquired whether there will be  
24 any limitations on the duration of your deliberations. I  
25 will place no constraints on the length of your

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1 deliberations by way of time.

2 I am told that at least a couple of you have  
3 some Easter plans, but are willing to return on Monday if  
4 you were given early enough notice so you can make  
5 arrangements.

6 I hope this is early enough notice, because I  
7 don't think you are going to get this case until sometime  
8 tomorrow.

9 I suspect that you may well need more time than  
10 the balance of the day on Thursday to properly consider the  
11 evidence.

12 So that's my guidance to you.

13 You may go to lunch and we will be back at 2:00.

14 (Jury leaves courtroom at 12:53 p.m.)

15 (Luncheon recess taken.)

16 THE COURT: All right, Ms. Walker. Let's bring  
17 in the jury.

18 (Jury returned.)

19 THE COURT: All right, members of the jury.  
20 Please take your seats. We'll now have Mr. Nathan's  
21 cross-examination.

22 MR. NATHAN: Thank you, Your Honor. Before I  
23 start, let me hand up some binders. Two for the Court, one  
24 for the witness.

25 I would also like to hand up, these were too

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1 bulky to put in notebooks.

2 THE COURT: Is that for the doctor?

3 MR. NATHAN: Yes. I have two copies. This is  
4 the '706 file history. I gave a copy yesterday.

5 THE COURT: I can do without that.

6 MR. NATHAN: I'm sure.

7 Anybody else I want a copy?

8 THE COURT: I don't need it.

9 Does Dr. Rothman need it?

10 MR. NATHAN: He will.

11 THE WITNESS: Can I do without it?

12 THE COURT: Probably not.

13 MR. NATHAN: And I have copies of the other  
14 Dr. Seguin patent file history.

15 THE COURT: Would you like the doctor to have  
16 that as well?

17 MR. NATHAN: Yes, please. I guess you don't  
18 care for it.

19 THE COURT: No, thank you. I'll watch the  
20 screen.

21 MR. NATHAN: All right. It's not a page turner.

22 CROSS-EXAMINATION

23 BY MR. NATHAN:

24 Q. Good afternoon, Dr. Rothman. Nice to see you again.

25 A. Good afternoon, Mr. Nathan. I've been looking toward

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1 with it.

2 Q. As with other witnesses, we met before. I took your  
3 deposition?

4 A. You did.

5 Q. In Washington?

6 A. Yes.

7 Q. And you testified truthfully then?

8 A. I beg your pardon?

9 Q. You testified truthfully then?

10 A. Of course.

11 Q. I want to understand, because your deposition was  
12 taken in October of last year.

13 A. Yes.

14 Q. Starting in November, you signed some papers with  
15 Medtronic, and you are now a full-time Medtronic employee.  
16 Is that correct?

17 A. Not quite. I signed at the end of November, and I am  
18 a full-time employee of Medtronic; but I also have -- I  
19 still retain a contract with my hospital to be able to  
20 undertake procedures. I'll be there probably every fourth  
21 or fifth week doing a week's work. So I think I hold two  
22 jobs.

23 Q. But, essentially, most of your time is spent working  
24 for Medtronic?

25 A. As others have said, I do more than a 40-hour week.

Rothman - cross

1 And, yes, I do a lot of my time with Medtronic, but I also  
2 do clinical work.

3 Q. And your paychecks, however you are paid, wire  
4 transfers or whatever, they come from Medtronic, do they  
5 not?

6 A. One comes from Medtronic and one comes from Boston to  
7 London National Health Service.

8 Q. The one from Medtronic, that comes from Medtronic?

9 A. Yes.

10 Q. From Minneapolis?

11 A. I don't know where it comes from.

12 Q. And Medtronic owns Medtronic CoreValve?

13 A. Correct.

14 Q. Now, you testified this morning that you have 50  
15 patents?

16 A. Around that.

17 Q. Yes. And you mentioned one on -- an early one on  
18 ultrasound, if I heard you correctly?

19 A. Correct.

20 Q. So you are an inventor?

21 A. I am.

22 Q. Do you have any patents on what we've been calling in  
23 this courtroom, THV, transcatheter heart valves?

24 A. I have no patent on a transcatheter heart valve. I  
25 have a patent application on a repair technology for the

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1 ascending aortic valve. That is the area immediately above  
2 the aortic valve.

3 Q. But the answer to my question is --

4 A. It's submission, not a patent.

5 Q. -- you have no THV patents?

6 A. I have not.

7 Q. Now, you testified this morning that you were trained  
8 by Dr. Palmaz. Is that right?

9 A. For coronary stent implantation.

10 Q. And just so we're talking about the same thing, this  
11 is a large model. That you have been here throughout the  
12 trial?

13 A. I'm sorry. I need to correct that. I haven't been  
14 trained by Dr. Palmaz. I was trained by Dr. Schatz who is  
15 Julio Palmaz's partner.

16 Q. And you were trained by Dr. Palmaz's partner on how to  
17 use this stent?

18 A. Actually, the next -- the generation for coronaries,  
19 similar to that, but it has got a little bridge in the  
20 middle that is one millimeter.

21 Q. And it is your testimony that you did this in 1987.  
22 Is that right?

23 A. Yes.

24 Q. What is the priority date in this case for the  
25 Andersen invention?

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1 A. The patent here is -- oh, the priority date. Can I  
2 look at the patent?

3 Q. Yes. If you look in your cross-examination notebook,  
4 I'm going to drive you into the smaller volume.

5 A. Thank you.

6 Q. If you look at Tab 4.

7 A. (Witness complies.) Yes, May 18th, 1990.

8 Q. May 18th, 1990.

9 A. That's the foreign application priority date.

10 Q. My question is between 1987, when you said that you  
11 first did a stent procedure, between 1987 and 1990, that was  
12 three years.

13 A. Yes.

14 Q. You didn't think of this invention, did you?

15 A. No.

16 Q. Now, in 1987, you had actually gotten a patent on  
17 your -- I've forgotten -- the ultrasound device; is that  
18 right?

19 A. Yes.

20 Q. So you were an active inventor in the time period  
21 starting in 1987 and going right up to the time the  
22 inventors filed their application in 1990?

23 A. Yes. My serious research interest was the development  
24 an ultrasound imaging system. That is what I was focusing  
25 on in terms of invention.



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1 Q. But between '87 and 1990, you didn't think of the  
2 Andersen invention, did you?

3 A. No.

4 Q. Now, we heard some testimony about other medical  
5 device companies: Medtronic, Edwards. Do you know a  
6 company called Cook?

7 A. Yes.

8 Q. You have been an expert in some litigation on behalf  
9 of Cook, have you not?

10 A. I have.

11 Q. And you actually made some comments during that trial  
12 on the Andersen '552 patent, did you not?

13 A. Almost certainly.

14 Q. Could you look in your notebook at Tab 5?

15 Could you put this up on the screen?

16 Let me start with just the first page to orient  
17 everybody. Plaintiffs' Trial Exhibit 1178. This is  
18 testimony from last May 6th, 2009?

19 A. Correct.

20 Q. And actually this case is where Cook sued Edwards?

21 A. Yes.

22 Q. And you testified on behalf of Cook?

23 A. Yes.

24 Q. Now, could you turn to Page 179, starting at Line 9  
25 and going through Line 13.

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If I could have those lines highlighted, please.

It's 179, Mr. Stevenson. Thank you.

Did you testify on behalf of Cook about Andersen as follows:

"Answer: Yes, I think there are some things, ideas, in Andersen that actually sound quite interesting and I quite like his concept for trying to avoid the coronary ostia, you know, these apices where you try and get them to avoid covering the coronary ostia, is a good idea."

A. Yes, it is an idea and an appropriate idea to try to avoid the coronary arteries.

Q. Is that an accurate transcription of what you testified in the Cook case?

A. Well, as you will understand, I can't remember exactly what I said, but if that is the transcript, that is what I said.

Q. Could you look in your notebook at Tab 9. And I'll take you to Page 186 of the transcript.

A. I'm sorry. I couldn't hear you, Mr. Nathan.

Q. It's Tab No. 9 in your notebook.

A. Yes.

Q. And it's Plaintiffs' Trial Exhibit 1178, Page 188 at the bottom. If you look in your notebook, you will see this at the bottom, 188 of 658.

Rothman - cross

1 Do you see that?

2 A. Okay. Yes. Sorry. I see where you are looking now,  
3 yes.

4 Q. And if you could highlight for us, Mr. Stevenson, the  
5 paragraph beginning at Line 2, all the way down to 21.

6 "Answer: My Lord" -- and I guess that is the  
7 way you address the judge in England? My Lord?

8 A. You do indeed, yes.

9 Q. So you were addressing the judge?

10 A. I was addressing the judge. I might get confused  
11 here, but ...

12 THE COURT: I'll have to go get my wig.

13 THE WITNESS: Thank you. Thank you, my Lord.

14 MR. VAN NEST: Let's not start tossing ideas  
15 around. (Laughter.)

16 BY MR. NATHAN:

17 Q. And when you testified to "my Lord," you wanted that  
18 judge to believe you, didn't you?

19 A. Of course. I was under oath.

20 Q. "Answer: My Lord, I think it's an  
21 interesting perspective, but I do not know for a fact but I  
22 would assume that the valve industry will have seen Andersen  
23 when it was published and will have known about it and they  
24 chose not to pursue it in great depth, because they felt  
25 that there was a pressure within their client base, the

Rothman - cross

1 cardiac surgeons, that this was not an idea to pursue."

2 Did you testify to that?

3 A. That is what I testified, yes.

4 Q. Now, do you know Dr. Cribier?

5 A. I do. I know Alain Cribier.

6 Q. And you know him personally? You have known him for  
7 years?

8 A. A very long time.

9 Q. And were you in the courtroom when he testified by  
10 video?

11 A. I saw the video, yes.

12 Q. Okay. How long have you known Dr. Cribier?

13 A. Probably 25 years.

14 Q. And do you value his opinion and judgment?

15 A. Let me just tell you that I don't know him as a  
16 personal friend in the socializing way. We don't dine  
17 together or go out drinking together, but I know him at  
18 conferences. I certainly respect his medical and  
19 entrepreneurial, innovative activities, certainly. And I  
20 respect him as a very honest individual.

21 Q. And so you know him professionally and you respect his  
22 judgment?

23 A. Absolutely.

24 Q. And were you here when he testified about what his  
25 view of the Andersen patent was and the accomplishment that

Rothman - cross

1 Dr. Andersen and his colleagues had achieved?

2 A. I understand that for an innovator, the idea of a new  
3 idea, the concept of a new idea --

4 THE COURT: Doctor, I think the question was  
5 "were you here."

6 MR. NATHAN: Yes, that's all. Were you here.

7 THE WITNESS: I think so. I'm not absolutely  
8 sure. I think so.

9 BY MR. NATHAN:

10 Q. Now, would you describe Dr. Cribier as a leader in the  
11 field of interventional cardiology?

12 A. He is a leader amongst a lot of leaders.

13 Q. But if you had to pick some of the top leaders, would  
14 you certainly classify him as one?

15 A. He certainly, as I said, as I was saying before, he is  
16 an innovator and he is passionately committed to improving  
17 the lot of his patients. So, yes.

18 Q. Now, what about Dr. Grube? And I hope I'm saying that  
19 right?

20 A. Eberhard Grube.

21 Q. Eberhard Grube. Do you know him?

22 A. Yes, same way.

23 Q. Same way. And for how long?

24 A. Less time. Probably 10 years or less.

25 Q. Do you value his judgment and statute in the

Rothman - cross

1       interventional cardiology field?

2       A.       That is a more difficult question. I think he is a  
3       superb operator, doing procedures. And I think he is very  
4       good at spotting new ideas and new innovations.

5               As a patient care and physician, I don't know  
6       his practice.

7       Q.       Do you read his publications?

8       A.       A few, yes. I more listen to him at conferences and I  
9       watch him operate on either live cases, video cases or live  
10      transmissions.

11      Q.       And when he talks, you listen?

12      A.       Yeah. More often, I watch. I'm very impressed by  
13      what he does rather less on what necessarily he says.

14      Q.       Were you here in the courtroom -- and again,  
15      apologies, I don't have eyes in the back of the head. Were  
16      you here when Dr. Seguin testified that Dr. Grube was one of  
17      the CoreValve early investigators or proctors, if not the  
18      earliest?

19      A.       I heard that from Dr. Seguin and I know it.

20      Q.       Could you put up on the screen the Grube 2005 article,  
21      which is Plaintiffs' Trial Exhibit 158. You will find it in  
22      Tab 8 of the notebook?

23      A.       Thank you.

24      Q.       When you testified here today and gave your opinions  
25      to the jury, my question is, did you take into account this

Rothman - cross

1 article?

2 A. Yes, I know about this article. Yes, I do.

3 Q. Would you go to Page 2 of 5?

4 A. Yes.

5 Q. What we have up on the screen is a composite of a  
6 piece of Page 2 and a piece of Page 5, because there is a  
7 reference, No. 1 here, and we pulled out from Page 5 the  
8 reference. I want to be sure you understand what we have  
9 done.

10 A. I can see what you did.

11 Q. All right. Did not Dr. Grube write in 2005, "Few  
12 years ago, treatment of aortic valve disease with  
13 percutaneous transluminal implantation of stent-based valve  
14 prostheses has been introduced and successfully tested in  
15 animal models"?

16 And the reference was the Andersen 1992  
17 publication?

18 A. I heard the testimony that you elicited from Dr.  
19 Seguin, I think it was. And I know that paper very well  
20 that that refers to. And the term successfully, as Dr.  
21 Andersen admitted to on the video, success in his testing  
22 was 60 seconds to five minutes and occasionally up to 90  
23 minutes.

24 The word success needs to be carefully  
25 interpreted in a scientific appraisal of a paper.

Rothman - cross

1 Q. That is not what Dr. Grube said?

2 A. I don't know, I don't know what you take from Dr.  
3 Grube. I take what I read. It says stent-based valve  
4 prostheses have been introduced and successfully tested in  
5 animal models.

6 I then go to the paper. And the paper says,  
7 short-term tests. That is the term.

8 He doesn't define success in any way. That is  
9 the paper -- that paper you are making reference to, that is  
10 the term of success, five minutes.

11 Q. Dr. Grube said, based on that, that the device had  
12 been successfully tested in animals?

13 A. Bearing that caveat in mind, I agree.

14 Q. These were the same pigs that you have tested, you  
15 talked about this morning and you said many of them failed?

16 A. The paper looked at eight pigs. Three had implants in  
17 the annular position, subcoronary, and three had immediate  
18 or partial death -- I am sorry, had immediate or partial  
19 covering of the coronary arteries. A number of the other  
20 implants in that paper were not even attempted in the  
21 coronary position. They were attempted either in the  
22 supracoronary position or in what you called yesterday or  
23 the day before the Hufnagel position, the position down the  
24 descending thoracic aorta.

25 Success in putting them in there, yes, Dr.



Rothman - cross

1 Andersen demonstrated success in putting them in all three  
2 places, for minutes at a time.

3 Q. So I understand your testimony, Doctor, Dr. Grube  
4 says it was successfully tested and you say it was not  
5 successfully tested?

6 A. No. I am using the word success with a definition  
7 that fits the paper you are referring to. Success in one of  
8 the other papers you were referring to might mean something  
9 else.

10 Q. I am talking about this paper.

11 A. I am defining success for that paper.

12 Q. So you would agree based on that paper that the tests  
13 were successful?

14 A. Within the caveats I have said, yes.

15 Q. Now, do you know a Steven Bailey?

16 A. Yes, I do, actually.

17 Q. Who was or is he?

18 A. If I am thinking about the Steven Bailey you are  
19 talking about, he is a cardiologist from Texas,  
20 interventional cardiologist from Texas. Am I correct?

21 Q. Let me put up a document that might help refresh you.

22 Do you, in your former home in England or your  
23 new home in California, do you have a personal library of  
24 textbooks?

25 A. I do, yes. It's somewhere on the high seas at the

Rothman - cross

1 moment.

2 Q. In some container, it is coming over here?

3 A. I hope so.

4 Q. So you are moving to Medtronic permanently?

5 A. For a number of years, yes.

6 Q. Do you know about a Topol textbook, a rather thick  
7 book, Textbook of Interventional Cardiology?

8 A. Yes, I know it well, Eric Topol's textbook.

9 Q. You actually have a copy?

10 A. I actually don't have a copy. I think we had a  
11 discussion about this previously.

12 Q. Thank you. Your memory on that is better than mine.

13 You have read it?

14 A. No, I actually haven't read it.

15 Q. Let me show you something that might be of interest to  
16 you.

17 Would you put up -- you will find this, Dr.  
18 Rothman, in Tab No. 10 of your notebook. This, for the  
19 record, Judge, is Plaintiffs' Trial Exhibit 700.

20 Do you recognize the cover page of the notebook,  
21 the Second Edition, Textbook of Interventional Cardiology by  
22 Eric Topol?

23 A. I do recognize this as being one of the older  
24 textbooks. I think this is the second edition, and there  
25 are now four or five, I believe, if I remember right.

Rothman - cross

1 Q. So you have seen this textbook?

2 A. Yes. As I say, this is, I believe, an old edition.

3 Q. If you would turn to the next page that's in your tab,  
4 No. 10, Page 3 of 13, just for reference, in the lower left,  
5 there is a copyright date, do you see, 1994, this is the  
6 1994 edition?

7 A. I thought so.

8 Q. Just to give you a frame of reference.

9 Would you turn to Page 5 of 13, the chapter  
10 Percutaneous Expandable Prosthetic Valves, Steven R. Bailey?

11 A. Yes.

12 Q. Is that the Steven R. Bailey that you know?

13 A. It is, because if you look on Page 4 it lists the  
14 contributors as Steven Bailey, associate professor at Texas  
15 San Antonio, so it is the same one.

16 Q. How long have you known him?

17 A. I know him a little. Maybe eight to ten years.

18 Q. Is he someone whose opinion you would respect as well?

19 A. I can't answer. I don't know him well enough. I know  
20 that he has written a patent or two that I have come across,  
21 and I know that he has written this chapter and other  
22 chapters. I know he is a good chap.

23 Respect, value his opinion? I can't be definite  
24 to say that.

25 Q. But you know about this chapter?

Rothman - cross

1 A. I know that chapter.

2 Q. And you have read it?

3 A. I read it in connection with the case you drew my  
4 attention to, the Cook case. I had never read this chapter  
5 before nor had I opened this textbook before giving evidence  
6 in preparation for the Cook trial last year.

7 Q. So you read it last year?

8 A. I read it, because it was given as a piece of evidence  
9 from the other side.

10 Q. Did you have it in mind when you gave your opinions  
11 this morning?

12 A. Yes. I remember it. I read it fully.

13 Q. Would you turn to Page 9 of 13. Can you tell me  
14 whether you recognize anything there?

15 A. These are pictures that are almost virtually the same  
16 as taken from Andersen's paper that you referred to in the  
17 European Heart Journal in 1992.

18 Q. So Dr. Bailey was writing about and actually showing  
19 graphic pictures of the Anderson prototype device?

20 A. Yes. He was showing pictures of the very rudimentary  
21 prototypes, here with sutures actually tying the wires  
22 together. This is actually a valve taken from an -- intact  
23 valve taken from an animal and stitched onto the frame, yes.

24 Q. Would you turn to Page 13 out of 13. The last page.  
25 I am going to direct your attention, where it says Current

Rothman - cross

1 Investigations, this is 1994 now, the first sentence, which  
2 I will come back to, then there is again one of these  
3 annoying footnotes, Footnote 13, if you could call that up  
4 and put them together, and Dr. Bailey wrote, "The most  
5 exciting published work in this area to date is the  
6 investigations by Andersen et al. from Denmark published in  
7 1992."

8 Footnote 13, that is that same European Heart  
9 Journal, 1992 publication that we have been talking about in  
10 this trial?

11 A. Correct.

12 Q. And you studied this in connection with the Cook case?

13 A. Well, it was repetition of the same thing you just  
14 drew my attention to. It is repetition of the same whisper,  
15 this is a good idea, an interesting idea from Andersen. And  
16 it is repeated several times over. All you are doing is  
17 citing the same piece of information several times. It  
18 doesn't change it, it doesn't make it more important because  
19 it is repeated.

20 Q. But you didn't mention this in your direct examination  
21 this morning, did you?

22 A. No. Why should I?

23 Q. Would you turn to the right-hand column of Page 13,  
24 and just the text, if I could just have you start the text  
25 where it says, "In ten years"?

Rothman - cross

1 Do you see that?

2 A. Yes, I do.

3 Q. "In ten years we shall very probably look back on the  
4 pioneering work described above in the same" -- that  
5 includes Andersen -- "in the same way we respect the work of  
6 Hufnagle, Gruentzig and Palmaz today. Certainly heart  
7 valves will undergo radical changes in design in the  
8 decade."

9 Did you take that into account when you  
10 testified in Cook?

11 A. Did I take it into account?

12 Q. Yes, sir.

13 A. I don't know what I am supposed to take into account.  
14 Maybe you could rephrase the question.

15 Q. Did you study this in connection with the Cook case?

16 A. Yes.

17 Q. Did you take it into account in formulating your  
18 opinions in the Cook case?

19 A. No.

20 Q. Now, just so we can get the period here, these words  
21 were written and published in 1994. You would agree with  
22 that?

23 A. I agree with that. Copyright 1994.

24 Q. In ten years, that would take us to 2000 --

25 THE COURT: The jury can figure that out.

Rothman - cross

1 BY MR. NATHAN:

2 Q. Did what Dr. Bailey write about come to pass?

3 A. Could you -- when an idea comes --

4 THE COURT: Doctor, he gets to ask the  
5 questions.

6 THE WITNESS: I was trying to answer it.

7 BY MR. NATHAN:

8 Q. You can answer it yes or no. Your counsel can bring  
9 out further testimony.

10 A. I was trying to be helpful, I am sorry.

11 Q. I wanted to know, did what Dr. Bailey wrote about,  
12 saying in ten years things were going to happen, did what  
13 Dr. Bailey wrote about come to pass in 2004 and later?

14 A. I think the idea, the principle of doing this, has  
15 come to pass in around ten years or so.

16 Q. Now, can I go -- we have to switch the computers.

17 Could you put up the animation, which is in  
18 CoreValve Slide No. 5.

19 MR. NATHAN: Judge, we rehearsed this just to  
20 make sure we cut this to a minimum.

21 BY MR. NATHAN:

22 Q. Do you recall playing this animation this morning?

23 A. I do.

24 Q. And testifying about it and how this valve sort of  
25 detaches and floats away?

Rothman - cross

1 A. Yes.

2 Q. Now, you did this video? It was your idea to do this  
3 video?

4 A. Yes.

5 Q. You instructed someone to prepare the graphics?

6 A. I did.

7 Q. It was all your idea?

8 A. Yes.

9 Q. Would you go back to the opening frame shot, Slide No.  
10 5. Just hold it there.

11 Is it possible for you to give us an  
12 enlargement, Mr. Hugo, of the valve portion?

13 All right. Do you know -- did you design for  
14 this graphic this actual -- it's on the screen there. It  
15 should be on your screen.

16 A. I designed that. I remember it.

17 Q. You actually designed the metal part, the stent part  
18 to go into this graphic?

19 A. It is a cartoon. Yes.

20 Q. It is a cartoon. In fact, it is a cartoon of Palmaz,  
21 isn't it? It's not a cartoon of Andersen?

22 A. It is a cartoon of a chicken wire fence, as we call  
23 it. It is just a structure to give the resemblance to a  
24 stent.

25 Q. This is not Dr. Andersen's invention, is it?



Rothman - cross

1 A. No. It's not intended to be. I was not intending to  
2 criticize specifically Dr. Andersen with this cartoon.

3 Q. So this cartoon, when you talked about dislodgement  
4 and the catastrophic failures and so on, this was not  
5 intended to be criticism of the Andersen invention?

6 A. Dr. Andersen's pig experiments lasted five minutes.

7 Q. Answer my question, please, Doctor. Was this intended  
8 to be the Andersen invention?

9 A. No, it was not.

10 Q. Now, in the course of your studies for this case, and  
11 I am sure you have looked through a lot of materials, you  
12 said you talked to people and so on, did you study what  
13 happened to the Andersen invention after 1990?

14 A. What specifically are you referring to?

15 Q. Did you look into who they licensed it to first?

16 A. I have heard the testimony in court about the order of  
17 things.

18 Q. So you are aware that, again, 1990, it took them three  
19 years to find Stanford Surgical, which sort of got renamed  
20 to Heartport. Heartport had it for seven years. So it was  
21 a ten-year period?

22 A. I heard all that.

23 Q. I would like to focus on, I am going to call it  
24 Heartport, initially it was Stanford Surgical, just change  
25 of names. Let's call it Heartport.

Rothman - cross

1 Did you study what happened at Heartport?

2 A. With respect, my role was to actually look at  
3 infringement and enablement matters relating to that.

4 The history of the invention, I am not sure that  
5 directly relates to whether Claim 1 is infringed or the  
6 device is enabled. I heard in court the elements. But I am  
7 not an expert in those areas.

8 Q. Did you not testify on direct examination from your  
9 lawyer this morning to this very day no one has ever been  
10 able to make the Andersen invention? Didn't you say that  
11 this morning?

12 A. I testified that I have never seen the Andersen device  
13 used in man.

14 Q. Now, let's focus on Heartport. Does the same Mitzy  
15 Garrison, a woman -- does that mean anything to you?

16 A. I do. I know the name and I have read testimony from  
17 her.

18 Q. So you read her testimony in this case about what  
19 Heartport did with the Andersen invention when they had it  
20 for those seven years?

21 A. Yes.

22 Q. And do you recall that she testified that for a while  
23 she was the only --

24 MR. FERRALL: Objection, Your Honor.

25 THE COURT: Basis, Mr. Ferrall?

Rothman - cross

1 MR. FERRALL: It's improper impeachment,  
2 reading --

3 MR. NATHAN: I am not reading anything. I am  
4 asking whether he recalls --

5 THE COURT: I will let you ask the question.

6 BY MR. NATHAN:

7 Q. Do you recall reading testimony about what Mitzy  
8 Garrison did during those seven years?

9 A. Not in great detail, no. I do remember some of the  
10 discussions taking place, yes.

11 Q. Do you recall that she testified about being the only  
12 engineer?

13 A. I can't remember that piece of testimony.

14 Q. Do you recall she testified that Heartport stopped  
15 work on the project?

16 A. I believe I know that Heartport moved on to trying to  
17 deal with the problem of the aortic valve and it being in  
18 the way and they moved in that direction, as a surgical  
19 company, that had more interest for them, removing the  
20 aortic valve, I believe. I am not expert in Heartport, I am  
21 afraid.

22 Q. You know that Heartport moved in other directions, but  
23 didn't work on the Andersen invention?

24 A. I am sorry. I can't answer that.

25 Q. Do you recall that Heartport never made an implant in

Rothman - cross

1 an animal with the Andersen invention?

2 A. I don't know the answer to that.

3 Q. Do you recall that Heartport never even tried to  
4 implant the Andersen invention in a cadaver?

5 A. I don't know the answer to that, either.

6 MR. NATHAN: Your Honor, for the next topics,  
7 I'm going to need the big board.

8 THE COURT: Go right ahead.

9 MR. NATHAN: This one I can lift. (Setting up  
10 easel and board.)

11 I'm not sure that is in the same place it was.

12 THE COURT: Members of the jury, can you see  
13 that?

14 Yes, they've indicated they can.

15 BY MR. NATHAN:

16 Q. All right. You were here when Dr. Buller made this  
17 analysis of how the patent Claim 1 is embodied in the  
18 CoreValve Gen 3 device?

19 A. I saw this in his answers. Yes.

20 Q. Can I have you on the computer screen, Plaintiffs'  
21 Demonstrative 37? It's a little version, just in case  
22 people want to watch it on the screen.

23 You were here when Dr. Buller took the blame and  
24 broke it down into 12 parts?

25 A. I recall.

Rothman - cross

1 Q. And he found each of the 12 parts in the CoreValve  
2 device.

3 Now, do you recall earlier testifying about  
4 CoreValve's patents this morning? Do you recall that?

5 A. Yes.

6 Q. And my question is, let's take the bigger binder. The  
7 bigger group of the file history there.

8 A. This brown one?

9 Q. Yes. The one that ...

10 A. Am I done with the other binder? For the moment.

11 Q. For the moment, yes, you can put that aside.

12 And perhaps, doctor, you might want to put that  
13 fish bowl aside before we have a calamity with water.

14 THE WITNESS: Right here, Your Honor?

15 THE COURT: That's fine.

16 (Witness places fish bowl on bench.)

17 BY MR. NATHAN:

18 Q. For the record, I'm giving you the file history of the  
19 '406 patent which is Defendant's Trial Exhibit 148.

20 Have you studied that file history?

21 A. No, I have not.

22 Q. And do you understand what a file history is?

23 A. Yes, I explained what it was this morning.

24 Q. I'll represent to you that that big stack is the  
25 history of what happened in the '406 patent in the United

Rothman - cross

1 States Patent Office. All right?

2 A. Yes.

3 Q. All right. So as you sit here today, do you know  
4 whether the United States Patent Office considered and went  
5 through -- if I could have Plaintiffs' Demonstrative 37  
6 again?

7 Do you know whether or not the United States  
8 Patent and Trademark Office, when they considered the '406  
9 patent, went through each of these 12 parts and considered  
10 whether or not they were found in the Generation 3 physical  
11 device, which is the device that is involved in this case?

12 A. I am -- I am not qualified to answer that question  
13 because I haven't read this file history, as I just  
14 acknowledged.

15 Q. No one ever asked you to look at this file history,  
16 did they?

17 A. No.

18 Q. How about the smaller one -- you can put that aside  
19 then -- smaller file history for the '682 patent?

20 And for the record, this is Defendant's Trial  
21 Exhibit 1276, I believe.

22 A. This one?

23 Q. Yes. It's about half the volume of the other one.

24 A. Sorry. I picked up Mr. Kinrich's file. I thought you  
25 asked about that.

Rothman - cross

1 Q. Could I have 1276 up on the screen? Defendant's  
2 Exhibit 1276.

3 This is the '682 patent that Dr. Seguin talked  
4 about, which was filed in 2002?

5 A. Is that in this binder?

6 Q. Yes.

7 A. I'll believe you. Yes. Okay.

8 Q. Well, you testified about this patent this morning.

9 A. No, I asked you whether it was in the binder. I can't  
10 see it.

11 Q. Well, do you recall testifying this morning about the  
12 '682 patent?

13 A. Yes, I do.

14 Q. If I could go back to Plaintiffs' Demonstrative 37.

15 Have you read the file history of this patent?

16 A. No, I have not.

17 Q. You haven't a clue what is in there?

18 A. That is not relevant to this case.

19 Q. Nobody asked you to look at that?

20 A. That was not relevant to the question that I was  
21 tasked with which I told the jury about this morning, which  
22 is looking at infringement of whether the CoreValve  
23 Generation 3 infringed and whether the Andersen '552 is  
24 enabled. So, no, I didn't read this document.

25 Q. But you gave specific testimony, did you not, this

Rothman - cross

1 morning about the '682 patent? And you said --

2 A. Yes, I pointed to the claim.

3 THE COURT: Doctor, let him finish the question.

4 I'm going to insist you finish your answers. Okay?

5 THE WITNESS: Thank you.

6 MR. NATHAN: I'll rephrase it, judge.

7 BY MR. NATHAN:

8 Q. You gave specific testimony this morning about the  
9 '682 patent?

10 If I could have it back up on the screen, 1276.

11 A. Yep.

12 Q. Did you not?

13 A. I did.

14 Q. And no one asked you to look at the file history of  
15 the '682 patent?

16 A. I'll answer again, no.

17 Q. Now, if I could go back to Plaintiffs' Demonstrative  
18 37.

19 As you sit here today, you don't know whether  
20 the Patent Office considered the question that the jury has  
21 to decide of whether these 12 parts are included in the  
22 physical device that is charged to infringer the Andersen  
23 patent.

24 A. I don't know the Patent Office. I know the Patent  
25 Office had the patent in front of them when they considered



Rothman - cross

1 and awarded this, the Andersen -- the Seguin patent. And  
2 that's what I said this morning.

3 Q. Yes. You said this morning that the Patent Office had  
4 the Andersen patent in front of them. My question was, did  
5 the Patent Office have in front of it the actual physical  
6 device and do this 12 part analysis?

7 A. I can't answer that.

8 Q. You don't know?

9 A. I'm in no position to answer it.

10 Q. Now, let me ask you -- you can put that file history  
11 aside.

12 A. (Witness complies.)

13 Q. I'm going to ask you some detailed questions about  
14 some of the 12 items, but the first question I have is, is  
15 the size of the device anywhere mentioned in Claim 1?

16 A. No, it is not.

17 Q. So if you're wrong --

18 A. I'm sorry. I'm sorry. There is one element which is  
19 there by inference. The last point in Dr. Buller's  
20 analysis, point 12, for implantation in the body channel by  
21 means of a technique of catheterization.

22 That actually implies size to me. And in 1990,  
23 as I explained to the jury, that implies size for two access  
24 ports: one in the brachial artery and the other in the  
25 femoral. And as I also pointed out, that tends to have me

Rothman - cross

1 think, no bigger than 8 millimeters for the device or no  
2 bigger than 3 millimeters for the device if I go from here.

3 So, yes, I think Claim 1 does tell me that I  
4 have to have a device that is implantable by catheter means,  
5 and I know what a catheter means is.

6 Q. Well, let me follow up on that then. First of all,  
7 there is nothing in the claim that says anything about  
8 implanting in a human, does it? This could work in animals.

9 A. Well, if you want to replace valves in animal, yes.  
10 I'm sure this could do it.

11 Q. Yes.

12 A. But the background says in humans.

13 Q. Ah. But the claim doesn't say that, does it?

14 A. It wouldn't be a very invaluable patent we would be  
15 fighting over.

16 Q. Well, let's put aside how valuable it will be.  
17 Perhaps CoreValve will figure out a way to make these and  
18 sell them in elephants or something, and I'm going to come  
19 to that.

20 THE COURT: Mr. Nathan, come on.

21 BY MR. NATHAN:

22 Q. There is nothing in here about humans, is there? In  
23 Claim 1?

24 A. I'm sorry. The implication of the whole patent is  
25 about finding a way, the whole of the background states,

Rothman - cross

1 specifically, on Column 1, with a direction to consider this  
2 as a claim heading to the management of human valvular  
3 disease.

4 So if you wanted to ignore that instruction that  
5 goes through the whole of the background and then reach this  
6 and say, but this doesn't apply to man, then as a lawyer,  
7 I'll take your advice, and that is exactly what.

8 Q. Well, let's go to part 12, where you were. Technique  
9 of catheterization.

10 There is nothing in that that says anything  
11 about specific size, like 24 French, or 21 French, or 18  
12 French, or 30 French? There is nothing about that, is  
13 there?

14 A. No. But I'm reading this as a man of ordinary -- a  
15 person of ordinary skill in 1990, and a cardiologist, which  
16 you and I know, by the definition of a person of ordinary  
17 skill, is an interventional cardiologist. That is what we  
18 both agreed was the reader of this patent in 1990. I'm that  
19 person. And as that person, I know what catheterization  
20 means.

21 Q. So the answer to my question is that the size, 18  
22 French, 21 French, 24 French and so on, is not written down  
23 there in part 12?

24 A. Nor is 46 French, which is the actual size of the  
25 device in the preferred embodiment.

Rothman - cross

1 Q. There is nothing, nothing in part 12 about that  
2 specific size?

3 A. No.

4 Q. Now, let's talk about the preferred embodiment. If  
5 you can go to your smaller notebook.

6 A. I'm sorry. I'm having trouble because when you move  
7 away from the microphone, I can't hear you, sir.

8 THE COURT: He wants to talk about the preferred  
9 embodiment, so he wants you to go to the smaller notebook.

10 THE WITNESS: Thank you very much. I'm sorry  
11 about that.

12 MR. NATHAN: And you are absolutely right,  
13 Dr. Rothman.

14 BY MR. NATHAN:

15 Q. If you can go to your small notebook, Tab 4, which is  
16 Plaintiffs' Exhibit 2.

17 A. Yes.

18 Q. And if you could turn to -- you have seen this  
19 before -- Page 2 of 9.

20 A. (Witness complies.)

21 Q. Would you agree with Dr. Pinchuk and Dr. Buller that  
22 Figures 1 and 2 are Dr. Andersen's preferred embodiment?

23 A. Correct.

24 Q. And would you also agree, as Dr. Buller and  
25 Dr. Pinchuk testified, that the claim is not limited to the

Rothman - cross

1 preferred embodiment?

2 A. As long as the embodiment contains all the elements of  
3 the claim.

4 Q. Do you understand that there can be other embodiments  
5 other than the preferred embodiment that are covered by a  
6 claim?

7 A. Absolutely, as long as they contain all the elements  
8 of the claim.

9 Q. Now, would you turn to -- there was some talk this  
10 morning about wires, 55 millimeter wires and so on?

11 A. .55 millimeter wires.

12 Q. .55 millimeter wires?

13 A. Yes.

14 Q. Could you turn to Page 8 of 9, which is Column 5?

15 A. Yes.

16 Q. And, Mr. Stevenson, if you could highlight the first  
17 full paragraph, starting with detailed description of the  
18 preferred embodiment and call that up.

19 Do you understand that this material is a  
20 description -- starting at Column 5, about Line 5, that this  
21 is a detailed description of the preferred embodiments?

22 A. I understand that.

23 Q. And do you understand that when the inventors talked  
24 about using .55 millimeter surgical stainless steel wires,  
25 they were talking about their preferred embodiment?

Rothman - cross

1 A. Yes.

2 Q. And were you here this morning when Dr. Knudsen was  
3 asked by CoreValve's counsel on his deposition, why did you  
4 pick .55 wire? And the answer was, because that is what was  
5 available?

6 A. I heard that.

7 Q. So would you agree with me that the .55 wire was just  
8 the best that they had at the time and that is why they  
9 disclosed it as their preferred embodiment?

10 A. Yes, I have no argument with that.

11 Q. Now, you mentioned earlier with respect to the  
12 CoreValve device, the large model, that it's an integral  
13 structure?

14 A. Yes.

15 Q. If you could leave that up there and call out Figure 1  
16 and sort of paste it on there a little bit. If you could do  
17 that, Mr. Stevenson. I don't know if that is possible.

18 Now, is Figure 1 an integral structure?

19 A. Right. Sorry. The figure itself or the device made  
20 from the figure?

21 Q. If someone were to build exactly what is in Figure 1,  
22 right now, today, and hold it in their hand, would that be,  
23 in your view, an integral structure?

24 A. I'm sorry. I need to ask another question. Is it  
25 constructed in the way of the constructions on the right or

Rothman - cross

1 am I going to modulate it or modify it to something else?

2 Q. I want you to build, to consider this device in Figure  
3 1 as the inventors described it, including two folded wires,  
4 2 and 3, which are welded at the ends, and two rings that  
5 are secured by means of a number of sutures, not shown.

6 And my question is if you were to build that as  
7 the inventors taught, would that be an integral structure?

8 A. I don't see it as such, no. It's held together by  
9 sutures. The two wire rings, the rings themselves, the top  
10 one and the lower one, are only welded at the end. They are  
11 tied together with sutures. That, to me, is not an integral  
12 structure. The Palmaz structure that you held before is an  
13 integral structure.

14 Q. So your definition of integral structure doesn't mean  
15 one piece, it means something that is made out of some  
16 common material and it has no beginning and end?

17 A. No. I mean it's sort of -- I think I mean that  
18 it's -- that's why I struggled with the answer to the  
19 question. I would think that if I were considering this for  
20 use in human, it would have to be a lot better than this, a  
21 lot stronger than this, and integrated into a much better  
22 fabricated unit. So I'm struggling with having something  
23 that is tied together with sutures as being an integral  
24 structure.

25 Q. Doctor, I'm not interested in -- you're downstream of

Rothman - cross

1 my question. I'm only interested in, this is what they  
2 taught to build?

3 A. Yes.

4 Q. If they build it this way, welded and sutured  
5 together, and the device, the ultimate device was in Figure  
6 1, would that be an integral structure?

7 A. I'm really struggling with the word.

8 THE COURT: Doctor, that is regardless of the  
9 intended use. When he says you are downstream, indeed, you  
10 are. If you could listen carefully to his question and  
11 answer his question, that would help the jury.

12 THE WITNESS: Your Honor, I agree. I'm just  
13 thinking about this thing coming apart.

14 THE COURT: That is exactly the point. Don't  
15 think about it coming apart. Think about it as built as  
16 described, regardless of the intended use.

17 THE WITNESS: I don't wish to argue, Your Honor.

18 THE COURT: No. And I don't want you to argue  
19 with me, because I'm going to start acting like "My Lord."  
20 Okay? All right. (Laughter.)

21 THE WITNESS: Okay. I'm warned. Thank you.

22 THE COURT: Okay. All right.

23 BY MR. NATHAN:

24 Q. So my question is, is Figure 1, built as the inventors  
25 taught to build it for their preferred embodiment, an



Rothman - cross

1 integral structure?

2 A. It is what it is. Yes.

3 Q. Now, can I -- I'm going to have to switch the  
4 computers, Mr. Hugo.

5 Could you pull up CoreValve's Demonstration No.  
6 2, which I believe is Figure 1?

7 And, first, I want to ask you, Dr. Rothman,  
8 looking at the 12 parts of Dr. Buller identified, I gather  
9 that you agree that all but parts 4, 8 and 9 are in the  
10 CoreValve device?

11 A. Can I just read through this?

12 Q. Please.

13 THE COURT: For the benefit of counsel, could  
14 you put it on the screen?

15 MR. NATHAN: Yes. Could you go back to  
16 Demonstrative 37? Thank you.

17 THE WITNESS: I'm sorry. What was the question,  
18 now that I read it again?

19 BY MR. NATHAN:

20 Q. The question is -- if you could just answer yes or no  
21 as just go through this because I want to save time.

22 You agree that the CoreValve device has  
23 Part No. 1?

24 A. Yes.

25 Q. Does it have Part No. 2?

Rothman - cross

1 A. The stent is elastic. Yes.

2 Q. Does it have Part No. 3?

3 A. It has commissural points.

4 Q. So the answer is yes?

5 A. Yes.

6 Q. Okay. And we'll pass 4 because I understand you  
7 dispute that.

8 Does it have 5?

9 A. I'm sorry. Did you -- you took that I disputed 4.

10 Q. Yes. Absolutely. We'll come back to 4.

11 A. You went too fast for me.

12 Q. We will come back to 4. I am trying to get off the  
13 table things that you don't dispute.

14 No. 5 is there?

15 A. Yes.

16 Q. No. 6?

17 A. Yes.

18 Q. No. 7?

19 A. Yes.

20 Q. What about No. 8?

21 A. It has a plurality of commissural supports, yes.

22 Q. And I know you dispute No. 9.

23 A. Yes.

24 Q. What about No. 10?

25 A. Yes.

Rothman - cross

1 Q. No. 11?

2 A. Again, we have an issue, because I believe the support  
3 for the commissure is spread over a number of cells and such  
4 that it's over the whole unit. So I have trouble answering  
5 that one in a straightforward way.

6 Q. You didn't mention anything about it in your direct  
7 examination as to why they don't infringe?

8 THE COURT: Mr. Nathan, that is an argumentative  
9 question. Ask another one.

10 MR. NATHAN: I will.

11 BY MR. NATHAN:

12 Q. Does the CoreValve device have any circumferential  
13 expandable sections between the commissural supports?

14 A. The reason I am having trouble is the word between,  
15 because the bits that are between the tabs are part of a  
16 structure that -- part of a support of the commissure. So  
17 between, the answer has got to be no, if you want to be that  
18 specific, because the whole frame provides support.

19 Q. When it collapses down and it expands out, isn't there  
20 material that expands between the commissural supports, the  
21 tabs that you have identified --

22 A. You are identifying the commissural support. I am  
23 saying the whole device is the commissural support.

24 Q. This morning, did you not testify that the commissural  
25 supports are the tabs?

Rothman - cross

1 A. No, I didn't say that. I said the commissural support  
2 is on the tab, but the whole device, I put the two together,  
3 the whole device provides support to the valve.

4 Q. Were you here yesterday when Dr. Pinchuk testified?

5 A. Yes.

6 Q. And did you hear him identify that the CoreValve  
7 device has commissural supports?

8 A. I am only giving my evidence now.

9 Q. If your evidence conflicts with his --

10 A. I am not saying that. I am saying I am giving my  
11 evidence and I will stand by that.

12 Q. All right.

13 Then what about 11. Does the CoreValve device  
14 have that?

15 A. Yes.

16 Q. And No. 12?

17 A. No. 12, it is most definitely by means of a  
18 catheterization technique.

19 Q. Can we go back to CoreValve Demonstrative No. 2, Mr.  
20 Hugo?

21 When you did this analysis, this is the first  
22 slide that you put up, "a plurality of commissural supports  
23 project," and so on. The picture that you put up, to be  
24 clear, was the preferred embodiment?

25 A. Correct, yes.

Rothman - cross

1 Q. Can I have Plaintiffs' Demonstrative -- let me ask  
2 this. Would you hold up the CoreValve device?

3 A. The big one?

4 Q. Yes.

5 And I see, you have got your hand around the  
6 bottom portion. This morning you motioned to the jury that  
7 you didn't find a cylinder in the bottom portion of the  
8 device because it had a slope or cone. Do you remember  
9 saying that?

10 A. I do. I am sorry. There is background noise. If you  
11 could stand a little closer to the microphone. Thank you.

12 Q. I will ask it again. Do you remember holding that  
13 device up to the jury and saying that the bottom portion,  
14 you find no cylinder in there because it is a cone or  
15 conical section?

16 A. That is what I intended to say, yes.

17 Q. Is it your testimony that in order to meet Element No.  
18 4 -- if I could have Plaintiffs' Demonstrative 37 up, for  
19 the benefit of counsel and the Judge -- in order to meet  
20 Element 4, that it has to have a cylinder at the bottom?

21 A. Bearing in mind the Court's construction of the term,  
22 yes.

23 Q. Can I have Plaintiffs' Demonstrative 86.

24 Do you know what that is?

25 A. Well, it's the first time I have seen it. I know what

Rothman - cross

1 it is. It is a representation of a cylinder.

2 Q. A perfect cylinder?

3 A. What is called a right cylinder.

4 Q. Right cylinder, perfect cylinder, right cylinder.

5 Is it your testimony that CoreValve does not  
6 infringe because the bottom portion doesn't have a right or  
7 perfect cylinder?

8 A. I am sorry, I don't understand the question directly.

9 I have said that this is conical and that the  
10 claim calls for something that is cylindrical. I am saying  
11 that this is conical.

12 Q. And is it your testimony that when the claim calls for  
13 something cylindrical, it means a perfect right cylinder?

14 A. Well, I tend to think of a cylinder having a distance  
15 between the sides, the opposite sides, the diameter to  
16 remain constant.

17 Q. Can we go to -- I am almost at the end, Judge, for the  
18 benefit of everyone in the room.

19 Can we go to Plaintiffs' Trial Exhibit 2, pull  
20 up Column 6. If you could, I don't know if you can do this,  
21 but if you could grab this paragraph beginning at Column 6  
22 of the patent, if you could just show what the lines show,  
23 because I am going to ask about the lines.

24 Then if you could also shrink that a little bit  
25 and put up Plaintiffs' Demonstrative 29. If we can put this

Rothman - cross

1 picture up at the same time. I don't know if that is  
2 possible.

3 Now, Dr. Rothman, did you need a moment?

4 A. No, that's all right.

5 Q. Do you recognize that you were asked about the Column  
6 6 higher stent embodiment of the Andersen patent?

7 A. Yes.

8 Q. And let me just highlight those two words, "higher  
9 stent," in Line 56. And would you also highlight in Line 61  
10 "valve itself," then I will ask you a couple of questions.

11 Now, you were here when Dr. Buller testified  
12 that the higher stent shown -- sorry, described in Column 6  
13 was what he depicted in Plaintiffs' Demonstrative 29?

14 A. Correct. I was here.

15 Q. And this morning, you said that that can't be right  
16 because, in Line 61, the valve itself was a reference to the  
17 native valve?

18 A. That was my -- that is my interpretation.

19 Q. I would like to show you another demonstrative. Could  
20 you put up Plaintiffs' Demonstrative 85. How many -- do you  
21 have any idea how many times valve is referred to in the  
22 '552 patent?

23 A. Yes. Almost every time the word valve is used to  
24 describe the invention, it has the word prosthesis beside  
25 it. And you have highlighted just valve. But it is almost

Rothman - cross

1 always followed by the word prosthesis.

2 Q. Whenever the inventors were talking about a valve,  
3 they were talking about their invention?

4 A. No. Whenever they said valve prosthesis, they were  
5 talking about their invention. If you look at the columns  
6 you have highlighted in 5 and 6, if we take, for example --  
7 I am sorry, I can't read this very well. If we take --

8 Q. Could you go back to the previous composite? It might  
9 be easier.

10 MR. VAN NEST: Blow this up.

11 THE WITNESS: If you could blow up Column 5 to  
12 start with, left-hand side, just go down, including all the  
13 yellows, the whole paragraph, if you wouldn't mind.

14 If you would go further down the page, where  
15 there are lots of yellows.

16 If we look at the beginning of -- Line 29, the  
17 biological valve, that is the native valve was removed from  
18 a slaughtered pig. The valve was cleaned, clean valve, et  
19 cetera.

20 Then we go down to Line 35 and say the contact  
21 valve prosthesis.

22 The next line we say valve prosthesis.

23 The next line we say valve prosthesis.

24 The next line we say valve prosthesis. This  
25 describes the innovation. That was the innovation, contact



Rothman - cross

1 valve prosthesis or it is sometimes valve prosthesis.

2 What Dr. Buller misunderstands there is the word  
3 prosthesis.

4 Q. Let me go back and ask it another way then about  
5 Column 6, if you could have that side by side.

6 If Dr. Buller is incorrect, and you are correct,  
7 that this device, when they talk about using a higher stent,  
8 would be all up here, past the coronary ostia, and that the  
9 valve itself is the native valve down here --

10 A. That is my interpretation.

11 Q. -- wouldn't this not work because the native valve  
12 would still not function, and then it doesn't make any  
13 difference what you put above it, the native valve would  
14 still not open and close properly or leak? And isn't the  
15 whole point of this to put the --

16 THE COURT: So you have one question, then you  
17 can ask the next.

18 BY MR. NATHAN:

19 Q. Isn't that the whole point?

20 A. As you read the patent from 1990, the general  
21 direction of travel for the whole patent is in the  
22 management of aortic regurgitation or aortic leakage.

23 If I can point you to Figure 9, where the valve  
24 is put in the descending aorta, that is for the treatment --  
25 that's what Hufnagel proposed as a treatment for aortic

Rothman - cross

1 regurgitation, that wouldn't work for stenosis. If you have  
2 a stenosed valve that won't open, putting a prosthesis down  
3 the aorta doesn't help this.

4 This is for a leaking valve. When it opens, it  
5 opens okay; when it closes, it doesn't close completely. It  
6 leaks back. If this invention worked, if you put the  
7 invention somewhere else, then you will reduce the  
8 regurgitation.

9 That was the intent in the main about the paper.

10 You are quite right, Mr. Nathan. Putting a  
11 valve in the supracoronary position, above the coronary  
12 arteries, will not treat aortic stenosis. So you are right.  
13 Aortic stenosis is not treated by that maneuver.

14 Q. The answer to my question is that your interpretation,  
15 which is that the whole device has been moved up in the  
16 supracoronary position, up here and towards the ceiling, and  
17 that the valve itself is a reference to the native valve, it  
18 won't work for aortic stenosis?

19 A. It won't work for aortic stenosis, correct. That's  
20 what I said.

21 Q. Do you recall some testimony this morning about -- if  
22 you could put the big model in front of you.

23 MR. FERRALL: Your Honor, may we approach?

24 THE COURT: Yes.

25 (The following took place at sidebar.)

Rothman - cross

1 MR. FERRALL: I believe Edwards's time is up.

2 THE COURT: Oh.

3 MR. NATHAN: I have three questions and there  
4 will be no rebuttal case.

5 THE COURT: Three questions?

6 Mr. Nathan, I just want you to know, I don't  
7 know how many patent cases I have tried, a lot, in addition  
8 to many, many other trials. I have never had this happen.  
9 Never had it happen.

10 (End of sidebar conference.)

11 THE COURT: Three questions.

12 BY MR. NATHAN:

13 Q. On the model there, you testified this morning about  
14 30 degrees?

15 A. Yes.

16 Q. When the device is collapsed on a catheter, is at 30  
17 degrees?

18 A. Of course not, no.

19 Q. Do you remember being asked about a video this  
20 morning, and you said it was a video that was done at some  
21 elevated pressures, 200, that's a high pressure?

22 A. Systolic blood pressure, yes.

23 Q. Do you know that the FDA required that test?

24 A. I am sorry, that particular test?

25 Q. Yes, sir.

Rothman - redirect

1 A. No. My understanding is that that test was never used  
2 for the FDA.

3 Q. My final question. You are aware, are you not,  
4 Dr. Rothman, that the FDA has never approved the CoreValve  
5 device?

6 A. I don't believe it's been asked to approve the  
7 CoreValve device yet.

8 Q. So the answer to my question is they have not approved  
9 it?

10 A. I think you are right. I am not actually certain.  
11 I'm not qualified to answer that question.

12 MR. NATHAN: Thank you, Judge. No further  
13 questions.

14 THE COURT: Thank you, Mr. Nathan.  
15 Your redirect.

16 MR. FERRALL: Just one question, Dr. Rothman.

17 REDIRECT EXAMINATION

18 BY MR. FERRALL:

19 Q. When you gave your opinion on the term, on the claim  
20 limitation "cylindrical support means," did you have the  
21 Court's claim construction here under Item No. 4 in mind?

22 A. Yes.

23 Q. And you applied that?

24 A. Absolutely.

25 MR. FERRALL: No further questions, Your Honor.

1 THE COURT: Thank you, doctor. You are excused.

2 THE WITNESS: Thank you very much.

3 (Witness excused.)

4 THE COURT: All right. Mr. Van Nest.

5 MR. VAN NEST: Good afternoon, Your Honor,  
6 CoreValve has no further evidence to present. We have some  
7 housekeeping for the Court at this time.

8 THE COURT: Okay. Let join together at sidebar.  
9 Yes, Mr. Nathan.

10 MR. NATHAN: Can I also announce, Your Honor, we  
11 have no rebuttal witnesses. We have just housekeeping  
12 matters.

13 THE COURT: All right. Should I let the jury go  
14 back?

15 MR. VAN NEST: I think it would be wise.

16 THE COURT: Let's do that. Why don't we allow  
17 you to go back to your deliberating area.

18 Oh, yes. Let's move that out of the way.  
19 Mr. Ferrall is going to get that out of the way.

20 (Jury left courtroom.)

21 THE COURT: Counsel, let's everybody take a  
22 short break.

23 (Brief recess taken.)

24 THE COURT: All right, counsel. Let's take our  
25 seats.

1                   So, counsel, what I propose at this time right  
2                   now is to let the jury go home. You finished the evidence.  
3                   And I'm sure there are some housekeeping matters you want to  
4                   revisit with me -- not revisit but, you know, and if you  
5                   could give me some idea of how long it's going to take to  
6                   have the discussion that you want to have.

7                   Mr. Van Nest.

8                   MR. VAN NEST: I don't think it will take long,  
9                   Your Honor, because our plan was we're almost straight on  
10                  exhibits. We have a few to move in. We have -- both sides  
11                  may have but certainly we have some JMOLs, but those would  
12                  be placed in your hands later on. We would just note we  
13                  would be making them nunc pro tunc.

14                  The real question is --

15                  THE COURT: I'm not going to charge this jury  
16                  tonight.

17                  MR. VAN NEST: Okay. If you are not going to  
18                  charge the jury tonight, we don't see any point. We thought  
19                  perhaps we would be in a position to do that.

20                  THE COURT: No, because we're going to have to  
21                  have some discussion about the still disputed areas.

22                  MR. VAN NEST: Right.

23                  THE COURT: And then counsel for Edwards is  
24                  going to need some time to word process, perhaps. Well,  
25                  they will.

1 MR. VAN NEST: Yes, I think you are right. I  
2 think you are right.

3 THE COURT: Do you agree, Mr. Nathan?

4 MR. NATHAN: I do, with a couple of housekeeping  
5 issues.

6 That was some talk about some 600 exhibits.  
7 We've cut it way back.

8 THE COURT: Well, we can have that discussion,  
9 but I'd like to let these folks go home.

10 MR. NATHAN: Absolutely.

11 THE COURT: So, Ms. Walker, will you bring them  
12 back in.

13 THE DEPUTY CLERK: Okay.

14 THE COURT: Well, it seems that, unless I'm  
15 delirious, which is entirely possible, that you've agreed on  
16 a verdict form.

17 MR. VAN NEST: I think that is right. I don't  
18 think there is a lot of issues on the instructions. But the  
19 only issue is if you don't want to charge the jury tonight,  
20 we should send them home.

21 THE COURT: Oh, no, no. They're going home.

22 MR. VAN NEST: Yes. But I don't think the  
23 discussion we're going to have will take that long.

24 MR. NATHAN: Judge, I'm sorry. I don't -- we  
25 have not agreed on the verdict form.

1 MR. VAN NEST: I apologize.

2 THE COURT: Oh, you don't. Okay.

3 MR. NATHAN: We're close.

4 THE COURT: The form that I have must be one  
5 side's. It doesn't identify which side it's from. It just  
6 says verdict form.

7 MR. BLUMENFELD: I think CoreValve, Your Honor,  
8 filed one this morning while we were in court. And, you  
9 know, I saw it on my Blackberry. I don't know if we have  
10 seen it yet.

11 THE COURT: Just for future reference, not that  
12 we're going to need it, but a parenthetical would have been  
13 helpful.

14 MR. VAN NEST: Yes.

15 MR. NATHAN: Remember, judge, I reported I got  
16 it down to five questions? I sent it over, they came back  
17 with some additional ones, and I haven't seen it, and we  
18 told them that there were some issues. And I guess they  
19 filed it without consulting me.

20 THE COURT: It's okay.

21 MR. NATHAN: We're very close.

22 THE COURT: Well, good. Good.

23 Counsel, while we're waiting, we're going to  
24 start at 9:30 tomorrow. I've got a meeting at 8:30. A  
25 judges' meeting.



1 (Jury returned.)

2 THE COURT: All right. Ladies and gentlemen,  
3 please take your seats. Sorry to rush you.

4 So we've now completed the evidence, members of  
5 the jury. I'm going to let you go a little early, in just a  
6 few moments.

7 Counsel and I will spend the remainder of our  
8 time together getting your final jury instructions ready and  
9 dealing with some other housekeeping matters so that we can  
10 have you in your seats tomorrow by 9:30. I have a meeting  
11 first thing in the morning at 8:30, it will take about an  
12 hour, that I can't avoid.

13 And my time prediction is this for your planning  
14 purposes. It should take me roughly about an hour and  
15 20 minutes is my suspicion, based upon what I have seen  
16 regarding the jury instructions, to instruct you. And then  
17 I'm going to give you about a 10-minute break because you  
18 are going to need it, please believe me, after. I'll need  
19 it as well.

20 And then you are going to hear from each side.

21 I think we've agreed on just two rounds; right?

22 MR. NATHAN: Yes, Your Honor.

23 MR. VAN NEST: That's right, Your Honor.

24 THE COURT: And so here is where I'm going to  
25 impose a strict limitation on counsel. They will each have

1 an hour to discuss their cases and their points of view with  
2 you.

3 Then you will get the case for your  
4 deliberations.

5 So that puts us at roughly the noon hour. Okay?  
6 Ms. Walker will take care of you, make sure you ordered your  
7 lunch so you won't be going without. She'll provide you  
8 with that tomorrow, you will make your selections, and then  
9 we'll put the case in your hands.

10 Again, there will be no time constraints. That  
11 issue will be entirely in your hands. And if needed and  
12 necessary, and I wouldn't be at all surprised that it would  
13 be, you will be free and welcome to resume deliberations,  
14 should you not be at the point of unanimous verdict on  
15 Monday. Okay? Travel safely.

16 (Juror No. 8 indicating.)

17 THE COURT: You can pose it to Ms. Walker, okay,  
18 Juror No. 8? And she will communicate the question to me.  
19 Okay?

20 And she can do that right now when you go out so  
21 that if you would all just hang around for a moment, maybe  
22 it might pertain to all of you. Does it pertain to  
23 everyone?

24 (Juror No. 8 indicating yes.)

25 THE COURT: Okay. Why don't you take them out.

1 CHIEF DEPUTY CLERK WALKER: All right.

2 THE COURT: Remember my earlier instructions.

3 Let me remind you of them. I know you probably have them  
4 engrained. But now that the evidence is completed, you must  
5 keep those minds open, you really must, not do any research,  
6 listen to anything about the case or read anything during  
7 your research. I did see a member of the media here. I  
8 don't know if there is going to be any reporting, but you  
9 need to avoid any reporting that you might see on the  
10 topics, not just the case specifically but the topics in  
11 general that we've discussed here over these last days. And  
12 don't discuss the case with anyone.

13 All right. We'll see you tomorrow. I'm going  
14 to have Ms. Walker communicate the question to me, and if  
15 necessary, I'll feed right back, and I may need to discuss  
16 it with counsel. I don't know. Okay? All right.

17 (Jury left courtroom.)

18 THE COURT: Please take your seats. Let's see  
19 what the question is.

20 Yes.

21 MR. NATHAN: I'm sorry, I spoke too fast. When  
22 I said two rounds, we agreed before that there would about  
23 my closing --

24 THE COURT: Okay. So we're going to have a  
25 rebuttal closing?

1 MR. NATHAN: Yes.

2 THE COURT: Okay.

3 MR. NATHAN: I'm going to split it so it's 45  
4 and 15.

5 THE COURT: That's fine. I'll amend my advice  
6 to them tomorrow.

7 Insofar as the final jury instructions are  
8 concerned, were there any other -- I counted eight disputed  
9 areas. Are there still eight or have you arrived at some  
10 additional accommodations?

11 MS. NYARADY: We have not made any further  
12 agreements.

13 THE COURT: That's fine. I'm prepared to  
14 discuss them.

15 It would probably be helpful for me to see the  
16 competing jury forms, proposed verdict forms now, if you  
17 have them.

18 I think I have CoreValve's.

19 MR. VAN NEST: You do.

20 MS. NYARADY: May I approach, Your Honor?

21 THE COURT: Please, Ms. Nyarady.

22 While we're waiting, here is what I have still  
23 in dispute from the table.

24 Yes? Okay. Hold on.

25 (Court and chief deputy clerk confer.)

1 THE COURT: Counsel, here is the question that  
2 was propounded to Ms. Walker by Juror No. 8 on behalf of the  
3 jury.

4 If they arrive at the 4:30 tomorrow and want to  
5 continue their deliberations, are there any time constraints  
6 in that regard?

7 My response -- I'll invite counsel's feedback,  
8 but my response would be no. And I would leave it up to  
9 them.

10 And then they asked, well, then, if we don't  
11 have to go home at 4:30, how long can we stay?

12 My response will be we will allow you to stay as  
13 long as you want. We'll provide dinner. And they can  
14 determine the answer to that question depending upon where  
15 they are in their deliberations.

16 Is that acceptable?

17 MR. VAN NEST: Yes, Your Honor.

18 MR. NATHAN: Yes, Your Honor.

19 THE COURT: Ms. Walker, you got that?

20 CHIEF DEPUTY CLERK WALKER: Yes.

21 THE COURT: Why don't we deal with the  
22 housekeeping matters first.

23 I will certainly accept your proposal, Mr. Van  
24 Nest, to just receive any additional or new JMOLs by  
25 submission, unless you want to say something additional?

1 MR. VAN NEST: The only thing that I would say  
2 on that is, with respect to our JMOL on noninfringement and  
3 willfulness, we would simply renew those now without  
4 argument, for further supplementation.

5 THE COURT: I expected that you would. And I  
6 have thought about it. And there is nothing in the interim,  
7 that is between the time that I ruled and now, that would  
8 cause me to change my mind as to my previous ruling.

9 So I won't reconsider it. I will deny them.

10 MR. VAN NEST: Fine. We will then submit  
11 motions for judgment on the law, judgment as a matter of  
12 law, on damages and on enablement. But we will submit those  
13 on paper before the jury begins to deliberate. We will try  
14 to get those in this evening. They will be bullet-  
15 point-type items.

16 The only other items we have, we have two  
17 exhibits that we would like to move in that are not objected  
18 to on the defense side. One is DTX-1481. That is Dr.  
19 Seguin's drawing of his early prototype -- early concept.

20 THE COURT: Yes. There is no objection?

21 MR. NATHAN: No objection, no.

22 MR. VAN NEST: The other is DTX-1482. It's a  
23 CoreValve catheter and control device.

24 THE COURT: No objection to that?

25 MR. NATHAN: None.

1 THE COURT: That is admitted as well.

2 MR. VAN NEST: The parties are discussing, we  
3 don't have yet agreement but we hope to soon, there were  
4 some damage report type exhibits that plaintiffs had from  
5 Dr. Leonard and we had some from Dr. Kinrich that were  
6 marked and whatnot.

7 We are hoping to agree on a set for both sides  
8 that we can submit that are not objected to, and those can  
9 go in. And they can have those in the jury room instead of  
10 lots of other things.

11 THE COURT: That would be helpful.

12 MR. VAN NEST: I think, from our standpoint, the  
13 only thing left is to argue the jury instructions and settle  
14 those.

15 THE COURT: I am probably not going to entertain  
16 a lot of argument. I think I have a pretty firm mind on how  
17 I want to go with these. I will allow in some places brief  
18 discussion.

19 MR. BLUMENFELD: Your Honor, on our side, we  
20 also intend to move for JMOL on infringement, enablement,  
21 willfulness and damages. And as with CoreValve, we will put  
22 them in writing and make sure they are submitted before the  
23 case goes to the jury.

24 On exhibits, Mr. Van Nest just mentioned the  
25 damages demonstratives. They just made a proposal to us

1 after we are done with this. I will discuss that with our  
2 client and see whether we can agree on damages  
3 demonstratives going to the jury room and if so which ones.

4 We have a few other exhibit issues that Ms.  
5 Nyarady will address. Then the jury instructions and the  
6 verdict sheet.

7 THE COURT: Ms. Nyarady.

8 MS. NYARADY: We have I guess two separate lists  
9 of some exhibits that we have been conferring with counsel  
10 on. I am going to read into the record the few that we have  
11 agreed on today. So we would like to admit Plaintiffs'  
12 Trial Exhibit No. 173 and No. 2060.

13 THE COURT: These are all agreed?

14 MR. CIANFRANI: Yes, Your Honor.

15 THE COURT: Where they are agreed, they are  
16 admitted. Just go ahead and read it.

17 MR. NYARADY: We have got some other exhibits  
18 that were in binders, not specifically mentioned in the  
19 record, but were not objected to.

20 THE COURT: Those are admitted by operation of  
21 the pretrial order.

22 MR. NYARADY: Should I read the numbers into the  
23 record?

24 THE COURT: If you would like. I don't think  
25 it's necessary.



1 MS. NYARADY: I will be brief. So it's  
2 Plaintiffs' Trial Exhibit 83. Plaintiffs' Trial Exhibit  
3 144. Plaintiffs' Trial Exhibit 266. I should say these are  
4 all plaintiffs' trial exhibits. 777. 898. 1113. 1143.  
5 1159, 1434. 1667. 1706. 2031. 2033. And 2124.

6 THE COURT: All right. These are admitted.

7 MR. NYARADY: Your Honor, one housekeeping issue  
8 with respect to documents, Your Honor. There are few, and  
9 very few, less than ten, financial-type documents that are  
10 very sensitive to the clients. Opposing counsel and I would  
11 like to confer this evening and make a short list of  
12 documents we would like to offer under seal. We will get  
13 that to you in the morning.

14 THE COURT: Okay.

15 MS. NYARADY: I think those are all the issues  
16 on documents.

17 THE COURT: Okay.

18 So I have still at Issue 2.1 -- this is the  
19 parties -- I think 2.2 is actually -- let me go through what  
20 I perceive to be at issue. If it appears not at issue, that  
21 is fine.

22 MR. NYARADY: Your Honor, I may be able to help  
23 with this one. That was a typo. In my haste yesterday, I  
24 forgot to remove the Edwards proposed instruction. 2.1 was  
25 actually agreed to.

1 THE COURT: Let me see if I had a suggestion on  
2 2.1.

3 I have a little wordsmithing I would like to do.  
4 So maybe you want to take some notes down.

5 MR. NYARADY: Certainly.

6 THE COURT: These may seem like nudges. But  
7 when you are reading 61 pages of instructions, every little  
8 bit that I can eliminate is helpful.

9 I don't think, unless the parties are in strong  
10 disagreement with the Court -- I am at Page 11, Ms.  
11 Nyarady -- that the last sentence is necessary.

12 This is a nit. They know we are going to refer  
13 to the patents by the last three numbers.

14 MR. NYARADY: I will take that out, Your Honor.

15 THE COURT: This next one is at Page 12. This  
16 is going to show up, this question, in later instructions.  
17 The sentence, "Those products are then exported to foreign  
18 countries where they are implanted into patients."

19 I am not certain why that needs to be there.  
20 You can disabuse me of any notions about that. But it seems  
21 to me what happens in foreign countries is not at issue in  
22 this case.

23 MR. NYARADY: No, Your Honor. But the intended  
24 use of the product is. And it ties into the collapsible and  
25 expandable and implanted.

1 MR. VAN NEST: That term, collapsible and  
2 expandable is not a term at issue.

3 THE COURT: It's not. My distinct and decided  
4 point of view on that is that that language needs to come  
5 out there, and it needs to come out, also, since we are  
6 talking about it --

7 MR. NYARADY: I believe it's on Page 23 as well,  
8 Your Honor.

9 THE COURT: Yes. I have a strike-through at  
10 Page 23 as well. Any objection to that?

11 MR. CIANFRANI: No, Your Honor.

12 THE COURT: And then, Ms. Nyarady, back to Page  
13 12, I would just add between "Edwards" and "alleges," I  
14 would just say "Edwards also alleges."

15 And I would, in the last sentence, rather than  
16 refer to the contentions as allegations, make it  
17 contentions. It just seems consistent with the language  
18 that is used in other places and earlier.

19 On the next page, at Page 13, in the first line,  
20 you use the past tense, "the ReValving did." Aren't we  
21 speaking of the present tense here, shouldn't it be "does"?

22 MS. NYARADY: I would agree with that.

23 THE COURT: Later on again in that same  
24 paragraph, rather than "met every limitation," it should be  
25 "meets every element of the asserted claim." Again, at the

1 bottom, instead of "allegations," "contentions."

2 Do you see that, last sentence?

3 MS. NYARADY: Yes.

4 THE COURT: That was wordsmithing stuff.

5 Let's just make sure the others are correctly  
6 identified by the Court as in dispute.

7 2.4 and 5, we have summary of patent issues. I  
8 have two proposals on that. That is still in dispute.  
9 Right?

10 MR. NYARADY: Yes, Your Honor.

11 THE COURT: 3.2 and 3, construction of claims.

12 MR. NATHAN: Yes, Your Honor.

13 THE COURT: 3.4 and 5, patent infringement  
14 generally.

15 And 3.6 and 7, infringement open-ended or  
16 comprising claims.

17 3.8 and 9, literal infringement.

18 And 5.1 and 2, damages -- compensatory damages.

19 And 5.3 and 4, reasonable certainty.

20 Are those the remaining disputes?

21 MS. NYARADY: I have one more, unless it's been  
22 resolved by the sidebar today, which is 3.11, which is the  
23 prosecution history estoppel instruction that CoreValve  
24 proposes.

25 THE COURT: Prosecution history estoppel is not

1 going to this jury.

2 Let's go through them, then. You can resume  
3 your seat.

4 I agree, this is not open to discussion or  
5 debate, with Edwards at 2.4, positioning of the willfulness  
6 question. That is a question that will, in terms of the  
7 patent issues, rather, the second issue, with which the jury  
8 will have to contend is willfulness, right after  
9 infringement, literal and DOE.

10 I think that was the only disagreement as to  
11 that particular instruction. Is that right?

12 MR. CIANFRANI: That's correct, Your Honor.

13 MR. NYARADY: Your Honor, unless there has been  
14 a withdrawal of the proposal at Paragraph 5 in that  
15 instruction.

16 THE COURT: Yes. I have -- let me see my notes  
17 here.

18 Yes. I have a strike through the entire  
19 paragraph. I don't see the relevance. Let me make sure I  
20 am talking about the right one.

21 I will hear from you, Mr. Cianfrani. This is  
22 your proposal. Right? I don't see the relevance. Also,  
23 the way it's phrased is argumentative.

24 A jury instruction is a jury instruction. It's  
25 not an argument. It's not an opportunity for counsel to

1 continue to advance a position one way or the other.

2 Did you want to say something, also?

3 MR. CIANFRANI: Yes, Your Honor. With respect  
4 to this instruction, with almost every one of the  
5 CoreValve's witnesses, the plaintiff would be asking  
6 questions, Aren't they from Irvine? Didn't they used to  
7 work for Edwards? An implication of all of those -- in our  
8 letter to you last night we cited some of the transcript.  
9 The implication is that CoreValve either did something wrong  
10 because its employees stole secrets from Edwards or that  
11 CoreValve did something wrong because it hired Edwards  
12 employees.

13 The reason we asked for the instruction was to  
14 let the jury know that there is no trade secret allegations  
15 or unfair business practices. The fact that the witnesses  
16 may live in Irvine, it may be relevant to damages, but it's  
17 not opening any allegation of wrongdoing.

18 MS. NYARADY: Your Honor, I would just say I do  
19 not think there has been any implication of any impropriety  
20 in the questions. I think we have made our Irvine point  
21 very clear, several times.

22 The fact of the matter is that the damages  
23 question, it does involve whether or not there is a need for  
24 experienced, trained people in this field, and that they are  
25 concentrated in Irvine, and that they have been trained by

1 companies that are well known in the field. That's what it  
2 goes to.

3 I don't think the jury has taken anything away  
4 other than that point.

5 THE COURT: How do you know what the jury has  
6 taken away?

7 MS. NYARADY: I just mean I don't think there  
8 has been an implication of impropriety in the questions. We  
9 have not talked about them taking any information or  
10 documents. It's been clear on the record that they were not  
11 Edwards employees at the time that they started working for  
12 CoreValve. The timeline is very clear that many of these  
13 people were retired or they had moved on to other things. I  
14 don't see the record in the same way Mr. Cianfrani does.

15 THE COURT: Well, frankly, as I sat here and  
16 listened, there was -- I have to agree with Mr. Cianfrani,  
17 Ms. Nyarady, that there were a number of questions along  
18 these lines. Of course, it's not the questions that are the  
19 evidence, but the answers. Oftentimes, it seemed to me at  
20 the time that the jury could take away some negative  
21 inference from that.

22 So are you saying that, as we discuss this now,  
23 on reflection, Paragraph No. 5 -- what is the prejudice?  
24 Why wouldn't this help to clarify the purpose of the  
25 questioning?

1 I would add, also -- let me just refresh my  
2 recollection on what you wrote in your objections, perhaps  
3 not individually.

4 You write, just as you said, that Edwards has  
5 not alleged or intimated during the trial that former  
6 Edwards employees stole secrets. And you say the jury would  
7 likely be confused by an instruction regarding trade  
8 secrets.

9 MS. NYARADY: Your Honor, if I may add one more?

10 THE COURT: Yes.

11 MR. NYARADY: The instruction here is a summary  
12 of patent issues. The instruction starts out by saying  
13 these are a list of issues that you are being asked to  
14 decide. Then they are asking to insert at the very end, by  
15 the way, we are not asking you to decide this issue.

16 There were many other things that have come up  
17 in this trial, such as the relevance of the Dr. Seguin  
18 patents and relevance of whether the Dr. Seguin patents  
19 covers GEN 3. If we start down this track of what we are  
20 not asking them to decide --

21 THE COURT: I agree. Good argument. Yes. We  
22 will strike Paragraph 5.

23 MR. CIANFRANI: Your Honor, may I make one  
24 further point on that?

25 THE COURT: Yes.



1 MR. CIANFRANI: In Mr. Nathan's opening, we have  
2 the transcript of the opening, he promised the evidence will  
3 show that CoreValve hired engineer after engineer that had  
4 been trained and used to work for Edwards.

5 THE COURT: Is there somewhere else in the  
6 instructions? Because I do agree with Ms. Nyarady's point  
7 just made, that you might, counsel, might want to agree that  
8 language like this should appear. You talked about it in  
9 terms of damages. We can think about that while we are  
10 here.

11 MR. CIANFRANI: Your Honor, I would be perfectly  
12 happy to work with Ms. Nyarady to craft something  
13 appropriate.

14 THE COURT: That is fair, what you just said.  
15 I don't think this is the place for it. I agree with you.

16 You know, again, you folks are advocates, I  
17 understand that, but Mr. Cianfrani's point sort of  
18 underscores that it's a little disingenuous to suggest that  
19 the jury might not be left with that impression, that is, a  
20 negative impression, that there was some kind of nefarious  
21 behavior here in continually reaching out to the, albeit at  
22 some distance, in terms of time, former Edwards employees.

23 Okay. Enough of that.

24 So, Mr. Van Nest and Mr. Cianfrani, do you want  
25 to continue to beat the claim construction dead horse as to

1 3.2?

2 It's dead. Okay? I am not revisiting that, as  
3 Mr. Ferrall found out, again, at sidebar. The Court has  
4 ruled. You have preserved your position well. Quite  
5 frankly, you preserved it at Markman.

6 Continuing to raise the issue does nothing but  
7 pluck the Judge's nerves. That is what you have succeeded  
8 in doing on this particular point.

9 Yes, Mr. Van Nest, do you want to pluck them  
10 some more?

11 MR. VAN NEST: No, I don't, Your Honor, I assure  
12 you. I just want to understand. Is the instruction that is  
13 going to be read, will that be the one we discussed at the  
14 pretrial?

15 THE COURT: Indeed, it is.

16 MR. VAN NEST: Markman, with two sentences --

17 THE COURT: It is a jury instruction. It is an  
18 expansion that I think is consistent with the Court's  
19 understanding of the claims of the patent, the  
20 specification, and the prosecution history, intrinsic  
21 evidence.

22 MR. VAN NEST: Your Honor indicated, as we just  
23 opened the trial, the possibility of considering --

24 THE COURT: Not giving it.

25 MR. VAN NEST: Fair enough. I understand.

1           THE COURT: I think it's going to help the jury,  
2 perhaps not help it in a way that you would like, but I  
3 think this jury has a lot to wrestle with on that subject,  
4 and they have got very clear positions taken by the  
5 competing experts on that subject, who stood their ground,  
6 as did Dr. Rothman on the subject, in spite of lengthy and  
7 vigorous cross-examination.

8           I think the issue has been squarely met and the  
9 jury will decide in light of the testimony of those of skill  
10 in the art, who, it appears, had in mind the Court's claim  
11 construction. I am not so sure, but we will see.

12           I am leaving myself a little wiggle room, Mr.  
13 Van Nest.

14           I was being facetious.

15           MR. VAN NEST: I was hoping for some wiggle  
16 room, but just a little.

17           THE COURT: Yes.

18           Just small comfort. But I want you to know that  
19 I didn't just make the pronouncement at the pretrial and not  
20 revisit it in my own mind and continue to reconsider your  
21 positions. But finally, a position did lock up in my mind.  
22 I think it's the correct position.

23           Look, the Federal Circuit, you have got at least  
24 a 50-percent shot. I don't mind that I am not going down  
25 there, frankly. That's just fine. With all due respect to

1 my good colleagues on the Federal Circuit.

2 Okay. I think we are up to 3.4, patent  
3 infringement generally? If I didn't, I intended to imply  
4 that I am rather drawn to plaintiffs' 3.4, absent the last  
5 sentence. Are we together on that?

6 MS. NYARADY: Yes, Your Honor. We will strike  
7 the last sentence.

8 THE COURT: I think Mr. Cianfrani might want to  
9 say something.

10 MR. CIANFRANI: Your Honor, the last two  
11 sentences of the proposal that we had raised on Page 25.

12 THE COURT: I have those in mind. I have a  
13 delete edit of them.

14 MR. CIANFRANI: That goes to the 271(f). We  
15 have kind of beaten that horse to death as well. We do want  
16 to make the proposal that the jury be instructed that  
17 activities outside the United States shouldn't be considered  
18 for purposes of evaluating infringement, particularly the  
19 shape --

20 THE COURT: What is your recollection of what  
21 you think this jury heard on that subject, activities  
22 outside the U.S.?

23 MR. CIANFRANI: I believe, I am quite confident  
24 the jury heard that the device is compressed into a  
25 catheter. I even heard today that it was cylindrical, or

1 something similar to that, what was in the catheter. I  
2 think we saw some pictures of the device in the body.

3 So I did want --

4 THE COURT: Was it clear at the time of the  
5 presentation of those pictures that that was from activity  
6 outside of the United States? I don't recall. You may have  
7 a different recollection.

8 MR. CIANFRANI: It may have just been clear to  
9 me. I am not exactly sure of the context, not having sat in  
10 those chairs.

11 THE COURT: Let's get a reaction from Ms.  
12 Nyarady.

13 MS. NYARADY: Well, Your Honor, with the  
14 deletion of the sentence regarding them being implanted  
15 abroad and sold abroad, I don't think there is a need for  
16 these two sentences. The instructions are very clear that  
17 the accusation here is the making in California. We have  
18 deleted the selling language. We have deleted the supplying  
19 language.

20 I don't think there is any basis for confusion.

21 THE COURT: I agree. And so we'll stick by my  
22 position, Mr. Cianfrani, and we will delete, not include  
23 that sentence that starts with, "However, for the purposes  
24 proposed by CoreValve," at Page 25.

25 The previous sentence, Mr. Van Nest, I have

1 already excluded.

2 Okay. So 3.6 and 7.

3 There is a clause, a phrase that is objected to  
4 by Edwards that reads, "unless those additional features  
5 cause the accused device to lack a limitation."

6 I rather agree, Mr. Cianfrani, with plaintiff  
7 Edwards point that it is somewhat duplicative of the clause  
8 and phrase and misleading and also perhaps confusing. I  
9 really don't see what this adds to the instruction.

10 MR. CIANFRANI: Yes, Your Honor. Well, as you  
11 know, we've been talking about projections ad nauseam over  
12 the last few days.

13 THE COURT: I know.

14 MR. CIANFRANI: And you, I'm sure, know our view  
15 you can't have projections if there are things in between  
16 it. So in our view, it would be kind of like -- we  
17 understand the law, of course, is that additional elements  
18 can't avoid infringement. But, for example, if you claim a  
19 hole and somebody fills in the hole, you can't say that all  
20 you did was add additional elements to your hole.

21 And so what I wanted the jury to take away from  
22 that was that there are occasions, depending on what the  
23 claim limitation is, where additional material could  
24 illuminate the fact there are objections in this case or a  
25 hole, something along those lines.

1 THE COURT: I think the sentence as it reads,  
2 "the presence of additional features or components of the  
3 Gen 3 ReValving system would not avoid infringement of Claim  
4 1, period, is adequate instruction. So I'm going to  
5 disagree with CoreValve on that.

6 I have a proposed fix, as it were, for 3.8  
7 and -- the dispute over 3.8 and 3.9. I'm at 3.8. And  
8 counsel may not see this as a fix, but here is what I would  
9 suggest the change, the edit I would make.

10 To the last paragraph, the first sentence reads,  
11 "In addition, later filed patents are not relevant to  
12 literal infringement." And then I would add, "but, as I  
13 will now explain, be relevant to infringement under the  
14 doctrine of equivalents."

15 Do you want me to do it again?

16 MS. NYARADY: One more time, Your Honor.

17 THE COURT: That's okay.

18 "But, as I will now explain, be relevant to  
19 infringement under the doctrine of equivalents."

20 And then go look at the DOE instruction. I  
21 think as it reads rather than as it is proposed to read by  
22 Edwards might take care of the problem.

23 Mr. Cianfrani, did you catch that?

24 MR. CIANFRANI: Oh. Yes, Your Honor. We don't  
25 have any objection to the additional language.

1 THE COURT: Okay. Ms. Nyarady.

2 MS. NYARADY: I want to make sure this is clear.  
3 So we're keeping the paragraph and just adding that one  
4 sentence.

5 THE COURT: Well, we're getting rid of the  
6 second and third sentence in the paragraph, and we're just  
7 adding that one sentence, that one phrase to the first  
8 phrase that you have already proposed.

9 Did you understand that to be the case as well?

10 MR. CIANFRANI: Yes, Your Honor. That's fine.

11 THE COURT: Okay. Ms. Nyarady, did you get  
12 that?

13 MS. NYARADY: I did, Your Honor.

14 THE COURT: Do you have anything else you want  
15 to say?

16 MS. NYARADY: Yes.

17 THE COURT: Go ahead. Say it.

18 MS. NYARADY: I would like to keep the last  
19 sentence in that paragraph.

20 THE COURT: Last sentence.

21 MS. NYARADY: I think that saying they're not  
22 relevant to literal infringement, I think we need to  
23 reiterate if every element is met that the later patents do  
24 not avoid infringement. Maybe I could craft something.

25 THE COURT: What page are you on?



1 MS. NYARADY: 29 at 3.8.

2 THE COURT: I think this is the language that is  
3 particularly troublesome to CoreValve.

4 MR. CIANFRANI: That's correct.

5 THE COURT: And I see no reason for it. I see  
6 no reason for it. So there is no point in wasting your  
7 time.

8 MS. NYARADY: For the record, we maintain our  
9 objection.

10 THE COURT: I understand. You have your  
11 objection. It's overruled.

12 All right. Let's go to Page 40. I think 5.2 is  
13 next, if I didn't skip anything.

14 CoreValve proposes that this -- I think this is  
15 the only difference in the two proposed instructions. The  
16 last complete paragraph, the sentence, is, "They are not  
17 meant to punish an infringer." I think that is the  
18 offending language from Edwards' point of view. Is that  
19 correct?

20 MS. NYARADY: Yes, Your Honor.

21 MR. CIANFRANI: I believe so.

22 THE COURT: It's a correct statement of the law.  
23 I see no difficulty with it.

24 MS. NYARADY: If I may just say one thing, Your  
25 Honor?

1 THE COURT: Yes.

2 MS. NYARADY: I do think this is a little bit of  
3 a unique set of facts in this case with respect to damages.

4 We heard testimony from Dr. Leonard about the  
5 reasonable royalty, the hypothetical negotiation in this  
6 case. And this is one of those rare instances where the  
7 rate that he is setting forth may actually be higher, he  
8 testified to this, than what CoreValve would have been  
9 willing to pay. And my fear is that by putting in "this is  
10 not punitive," the jury might misunderstand because the rate  
11 comes above what CoreValve hypothetically would have paid,  
12 if that somehow doesn't enter into punitive rather than  
13 compensatory damages.

14 MR. CIANFRANI: Your Honor, the concern from our  
15 standpoint is that there are allegations of willfulness  
16 here.

17 THE COURT: Yes.

18 MR. CIANFRANI: And, you're right, I believe  
19 this is a correct statement of the law. The idea is so they  
20 don't say, well, it's \$25 million but they're willful so  
21 let's make it \$50.

22 THE COURT: I think the reasons for the doctor's  
23 testimony he made clear. Yes, I'm going to stand by my  
24 ruling. I will include this.

25 Okay. There is one more. Yes.

1                   CoreValve, do you dispute that the last sentence  
2                   on Page 42 is a correct statement of the law? That, yes,  
3                   here it reads: "Finally, any doubt regarding the  
4                   computation of the amount of damages should be resolved  
5                   against CoreValve."

6                   MR. CIANFRANI: It's almost a correct statement  
7                   of the law.

8                   THE COURT: Almost.

9                   MR. CIANFRANI: It's a half correct statement of  
10                  the law.

11                  THE COURT: All right.

12                  MR. CIANFRANI: And so in the letter that we  
13                  sent last night, I don't believe that --

14                  THE COURT: I haven't seen that letter. I meant  
15                  to tell you that.

16                  MR. CIANFRANI: I gathered that. And so we did  
17                  have a few case cites.

18                  THE COURT: You are wondering, oh, don't you  
19                  have anything else to do, judge, but read our letters? I  
20                  mean, okay, no. Yes, I do. Okay.

21                  MR. CIANFRANI: And the reason is that this  
22                  language appears in all the models: the Federal Circuit Bar  
23                  Association, the AIPLA.

24                  THE COURT: It does appear?

25                  MR. CIANFRANI: Not as it appears here.

1 THE COURT: Okay.

2 MR. CIANFRANI: And so we cited some of the  
3 models and the cases that those models rely on, and even if  
4 the case that Edwards --

5 THE COURT: Did you cite Judge Robinson's case?

6 MR. CIANFRANI: I don't know if we cited Judge  
7 Robinson's case.

8 THE COURT: It might be a good one to look at.

9 MR. CIANFRANI: But this language is reserved in  
10 the case law and in the models. And, in fact, if you look  
11 at plaintiffs' objections in the Sensonics case, the quote  
12 that they provided actually spells that out where the  
13 defendant doesn't provide adequate record keeping.

14 So if we didn't produce any of our records, then  
15 you do resolve the doubts against the defendant. But there  
16 is no allegation like that here.

17 So if you look at the quote from Sensonics there  
18 on Page 43, "If actual damages cannot be ascertained with  
19 precision because the evidence available from the infringer  
20 is inadequate, then damages can -- the doubts can be  
21 resolved against the infringer."

22 And that is what all of the models say, the  
23 AIPLA, the Federal Circuit Bar Association, the national  
24 patent jury instructions.

25 THE COURT: I take it Lam, Inc. -- well, this is

1 based on Sensonics. It's still good law.

2 MR. CIANFRANI: Yes, Your Honor. And I believe  
3 Lam, Inc. is consistent with that.

4 And so to just put all doubts are resolved  
5 against the defendant, that is not an accurate statement of  
6 the law. So, I guess you could go either way.

7 THE COURT: I think you did cite Judge  
8 Longobardi, whose seat I took. So that's not bad.

9 MR. CIANFRANI: Intentionally so, no doubt.

10 MR. VAN NEST: We incorporate Judge Robinson's  
11 ruling.

12 THE COURT: You incorporate.

13 MR. CIANFRANI: In almost every submission.

14 THE COURT: It would seem that counsel has a  
15 pretty good position on this.

16 MS. NYARADY: Yes, Your Honor. I might have  
17 agreed up until this morning, but this morning we heard from  
18 CoreValve's damages expert, and the damages expert  
19 specifically criticized Dr. Leonard for using projections  
20 and estimates.

21 And then we heard the cross-examination where it  
22 came out that, in fact, CoreValve did not give us its  
23 updated financial documents as the parties had agreed prior  
24 to the trial. And it's set forth -- the agreement is set  
25 forth undisputed in the pretrial order. We did not get

1       those numbers.

2               THE COURT:   So you are saying that as a result  
3       of that fact being developed, it falls directly and squarely  
4       within the Sensonics holding.

5               MS. NYARADY:   Absolutely, Your Honor.

6               THE COURT:   Yes.   How about that, Mr. Cianfrani?

7               MR. CIANFRANI:   Well, Your Honor, I don't think  
8       there is an allegation that we failed to keep accurate  
9       records.   At some point, there has to be a cutoff in the  
10      financial statements so that the experts can --

11              THE COURT:   Well, yes, I understand.   Well, I  
12      should have said, by analogy, it doesn't fall four square  
13      within Sensonics and the related cases.   But do you think  
14      that the spirit of Sensonics, wouldn't it be alive, given  
15      the testimony, were I to not agree with you?   It's a  
16      convoluted question.   It's a bad way of proposing the  
17      question.

18              In other words, Ms. Nyarady, you have heard what  
19      she said.   There was a cutoff in the documentation you  
20      provided contrary to an agreement.

21              Two things.   There was a cutoff, and contrary to  
22      an agreement that you had arrived with your opponents.

23              No. 1.   Do you agree or disagree with that  
24      statement?

25              MR. CIANFRANI:   Your Honor, we agreed to --

1 THE COURT: Because Ms. Weil doesn't, but go  
2 ahead.

3 MR. CIANFRANI: Yes please. The damages expert.

4 MS. WEIL: There was no agreement as to a  
5 specific cutoff date. We produced the most current sales  
6 data that we had for CoreValve. There was no sinister  
7 motive here. That's when we had data. Even if we carried  
8 it forward, as Mr. Kinrich said today, there would still be  
9 subsequent sales. And no matter what date you pick, you are  
10 still going to have to carry it forward. So if there is  
11 liability and damages are awarded, we're going to have to  
12 carry it forward from some date.

13 But this was not the situation addressed in  
14 Sensonic. There was not an agreement that we didn't abide  
15 by. We fully produced up until the moment that we had the  
16 data to produce. And this will be a housekeeping matter, as  
17 it is in any case where liability is found to bring any  
18 damages current.

19 THE COURT: Okay. Ms. Nyarady.

20 MS. NYARADY: Your Honor, it might have been a  
21 housekeeping matter if their expert hasn't criticized our  
22 expert for it.

23 THE COURT: I'm sorry. Say it again.

24 MS. NYARADY: I said it might have been a  
25 housekeeping matter if CoreValve's expert had not commented

1 on our expert's projections based on the fact that we didn't  
2 have the data.

3 I think this instruction is entirely proper in  
4 light of testimony we heard this morning.

5 THE COURT: I'm constrained to disagree with  
6 you. Okay?

7 All right. I think there are no other --

8 Now, how about, can you give me some guidance  
9 so we can try to put the verdict form to bed, as it were?

10 MR. CIANFRANI: Your Honor, one more thing.

11 THE COURT: Yes.

12 MR. CIANFRANI: In Instruction 5.5, I believe  
13 there is a typo. Hopefully Ms. Nyarady will agree with me.  
14 And that is on Page -- it's in 5.5 and 5.7.

15 And No. 3. It should say that "Edwards had and  
16 would have expanded" instead of "or would have expanded."

17 THE COURT: Do you agree with that, Ms. Nyarady?

18 MS. NYARADY: Yes, Your Honor.

19 MR. CIANFRANI: And same errors in 5.7.

20 MS. NYARADY: Yes, Your Honor. And just for the  
21 record, I just want to state that we maintain the objections  
22 to 5.1 and 5.3.

23 THE COURT: That's fine. Overruled.

24 So, counsel, these competing verdict forms,  
25 where do they -- you now know, based on my ruling on the



1 positioning of the issues, patent issues for the jury, that  
2 willfulness should come after infringement. That was one  
3 difference.

4 What are the other differences? I haven't had a  
5 chance to look.

6 MS. NYARADY: Your Honor, one thing we made some  
7 progress on, and correct me if I'm wrong, but I think the  
8 proposal of this morning was that we could agree up through  
9 Question 4 if we remove the language from this, from the  
10 Edwards' version, if we remove the language of, the words  
11 "artificial valve" that precede the word "art." This is in  
12 Question 4 of patent validity. And this is the enablement  
13 question.

14 THE COURT: So this is on the Edwards form.

15 MS. NYARADY: This is on the Edwards form. So  
16 we can agree 1 through 4 on the Edwards form if we remove  
17 the term "artificial valve" in our Question No. 4, and we  
18 agree to do that.

19 THE COURT: Is that correct?

20 MR. CIANFRANI: I believe so.

21 THE COURT: Go ahead, Ms. Nyarady.

22 MS. NYARADY: So the disputes are then limited  
23 to just the damages questions. And I apologize, Your Honor,  
24 but we don't have a current version of CoreValve's verdict  
25 form. I understand it was filed but we weren't given a copy

1       this morning.

2                       (Verdict form handed to Ms. Nyarady.)

3                       THE COURT: I'll let them digest that a little  
4 bit.

5                       (Pause.)

6                       THE COURT: Let me make sure I marked these  
7 forms correctly.

8                       As to Question Roman Numeral -- do you use roman  
9 numerals in yours?

10                      MR. CIANFRANI: We do, Your Honor.

11                      THE COURT: Okay. That doesn't help. Both of  
12 you do.

13                      Did you break down the damages question into  
14 three separate questions?

15                      MR. CIANFRANI: That was us, Your Honor.

16                      THE COURT: Okay. Fine.

17                      Mr. Blumenfeld.

18                      MR. BLUMENFELD: Your Honor, we think the  
19 easiest way to do it is the way we did it, which was just to  
20 ask the jury one question: If you found the patent valid  
21 and infringed, what was the damages?

22                      We have a lot of problems with CoreValve's  
23 proposal starting from the bottom, asking for the data  
24 point.

25                      THE COURT: Yes, No. 7. I didn't know that was

1 an issue.

2 MR. BLUMENFELD: Well, it may or may not be an  
3 issue. But the way they are creating it, they put in a  
4 period for themselves and a date for us. And I don't even  
5 know how that is supposed to work, so I think that one has  
6 to go.

7 The problem with the royalty, if we're going to  
8 split it, which we would prefer not to do, is that our  
9 expert testified on a royalty rate for the residual portion  
10 on which there were no lost profits. He didn't testify as  
11 to a specific rate if it was a total reasonable royalty. He  
12 testified as to a number.

13 THE COURT: So one wonders how the jury would  
14 determine a royalty other than based upon CoreValve's --

15 MR. BLUMENFELD: Correct, Your Honor.

16 So we think that the way we've done it, which is  
17 just what are the damages you find is the right way to do  
18 it; but certainly the second half of 6 and 7 we think ought  
19 to come out. I think it's designed to be somewhat confusing  
20 to the jury.

21 THE COURT: Well, whether it's designed to be or  
22 intentionally, I would suggest an intention to confuse the  
23 jury, I won't adopt that. But I think it could be confusing  
24 to the jury.

25 Here is what we'll do with the verdict form.

1 I'm going to let you discuss this some more -- we have some  
2 time -- and hope you will achieve an agreement.

3 Let me offer this guidance. I'm rather  
4 persuaded by Mr. Blumenfeld's argument that the way  
5 CoreValve has crafted the damages question and the way the  
6 evidence was presented would not fully account for  
7 Dr. Leonard's period of damages and not give the jury an  
8 opportunity to make a finding based on that testimony. It  
9 cuts the heart out of it, just doesn't account for it at  
10 all. I think that is undisputed.

11 So if you are going to work on this and can  
12 agree on a refinement, and maybe that is what it's going to  
13 take or maybe it's going to take a ruling of the Court, at  
14 least you have a basis now to discuss how you might refine  
15 that part of the question.

16 Mr. Blumenfeld is absolutely correct. You  
17 provided a period, Fall 2004 to Spring 2005. And this is  
18 under Question 7. Please indicate below the date for the  
19 hypothetical negotiation to be used.

20 I didn't really realize, and that may have just  
21 gone right over my head, that there was a real difference.  
22 I just don't recall this being an issue.

23 Ms. Weil.

24 MS. WEIL: Yes. If I can address that, Your  
25 Honor.

1           It is an issue. And Dr. Leonard's analysis for  
2 both lost profits and reasonable royalty was based on the  
3 date of January 3, 2006. And, in fact, this is going to be  
4 the basis for our JMOL.

5           There is no evidence whatsoever that there was  
6 any act within Section 271(a), and now we're limited to  
7 manufacturing that occurred on that date. That date is just  
8 completely unsupportable.

9           THE COURT: January 3?

10          MS. WEIL: 2006.

11          THE COURT: 2006.

12          MS. WEIL: And so our position is that  
13 Dr. Leonard's entire testimony is wrong as a matter of law  
14 because there is no factual basis to support it.

15          That being said, that is now going to be the  
16 basis of our JMOL.

17          This Question 7 is in the event you deny our  
18 JMOL, we need to know what the date is that the jury used  
19 for purposes of damages.

20          And I would refer the Court to the Integra Life  
21 Sciences v Merck case. It's 331 F.3d 860, a Federal Circuit  
22 case in 2003.

23          THE COURT: Could you give me the cite again?

24          MS. WEIL: Sure. 331 F.3d, 860. And its  
25 Integra v Merck.

1           In that case, the Federal Circuit remanded a  
2       decision back to the District Court because there was not  
3       evidence -- there wasn't a determination of what the  
4       reasonable royalty date was. And the Federal Circuit said,  
5       emphasized the importance of the date of the hypothetical  
6       negotiation, and because there wasn't a determination,  
7       remanded.

8           I am sure we would all like to avoid that. So  
9       in the event --

10          THE COURT: That has got to be an unusual  
11       occurrence, because usually, that is not an issue.

12          MS. WEIL: And it is an issue here. Sometimes  
13       it isn't an issue. Sometimes it's not, you are right. But  
14       it is here, especially in light of this case and to avoid a  
15       remand.

16          THE COURT: I don't worry about that kind of  
17       thing, except that I don't want to see all of you again.

18               (Laughter.)

19          I don't mean to be unkind. I'm teasing.

20          MR. BLUMENFELD: Your Honor, some of this goes,  
21       unfortunately, to the merits. But the hypothetical  
22       negotiation obviously goes to the reasonable royalty. The  
23       hypothetical negotiation is not part of the lost profits.  
24       We will look at that case and see what it says.

25          The notion that this was pulled out of thin air,

1 we heard from Dr. Leonard. We heard from their expert  
2 today. We heard from Mr. Michiels yesterday that January  
3 3rd, 2006 was the date that the design was frozen for the  
4 accused device. It wasn't like that was some date that was  
5 just made up.

6 And I think their own expert -- I don't have the  
7 transcript, obviously, yet -- but I think their own expert  
8 said today that it didn't really matter whether you took  
9 that date or took Dr. Leonard's date.

10 So I am not sure why any of this matters very  
11 much.

12 I don't think this is a case, under the  
13 testimony of either expert, where it's going to turn on,  
14 well, was it this date in 2005 or was it this date in 2006?  
15 They didn't go to market until the spring of 2007. I just  
16 don't think it has the significance. We will look at the  
17 case.

18 MS. WEIL: I think it has tremendous  
19 significance. First of all, Mr. Blumenfeld correctly  
20 reported on the testimony. The testimony was, and the only  
21 testimony was that as of that date the design was frozen.  
22 271(a) does not make an infringing act the date that a  
23 design is frozen. That is the only evidence to support that  
24 date.

25 So, you know, there is just nothing to support

1 it. And because there is nothing to support it, then all of  
2 Dr. Leonard's testimony fails, because he relies on that,  
3 not only for the reasonable royalty and hypothetical  
4 negotiation, but he also relies on that for his lost profits  
5 analysis.

6 So his entire damages analysis is 100 percent  
7 based on that date, which is not, even if there is  
8 liability, an infringing act under the patent law. If that  
9 date goes, there is nothing to support his testimony, and  
10 there wouldn't be any damages presentation by Edwards that  
11 is relevant in the record.

12 THE COURT: Let's give Mr. Blumenfeld and  
13 company a chance to read the case, give the Court a chance  
14 to read the case.

15 Read the case. Hopefully, you will be able to  
16 talk. Maybe agree, or maybe agree to disagree. We will  
17 have time before the jury needs to have use of the verdict  
18 form.

19 It may put a -- I won't be able to discuss, nor  
20 you able to discuss, if you choose to, with the jury, the  
21 form in its entirety, if we don't have agreement by the time  
22 of your closings. Do you see what I am saying? It would be  
23 a good thing if you could agree, or at least, probably, have  
24 the Court address the matter before your closings, and give  
25 a chance to have the final product, at least one iteration



1 of it, for use by the jury.

2 MR. VAN NEST: I would assume, Your Honor, if we  
3 do have agreement, and Your Honor has approved the verdict,  
4 Your Honor would reject a discussion of that with the jury  
5 in closing.

6 THE COURT: No, not at all. What I was really  
7 referring to was, frequently, as you know in the  
8 instructions, judges say, I am going to discuss the possible  
9 verdicts with you. And frequently I do not. And let  
10 counsel, because I know that oftentimes the lawyers like to  
11 talk about the verdict form. That is fine.

12 MR. VAN NEST: I certainly do. We will make  
13 every effort to get that agreed tonight.

14 MR. NATHAN: I will be discussing the verdict  
15 form.

16 THE COURT: Yes. That saves my voice as well.  
17 All right, counsel. Have a good night.

18 (Court recessed at 4:20 p.m.)  
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20  
21  
22  
23  
24  
25